

EDITOR
ASSISTANT PROFESSOR ŞENGÜL BÜYÜKBOYACI

EDUCATION, DEVELOPMENT, AND SOCIAL TRANSFORMATION: INTERDISCIPLINARY PERSPECTIVES

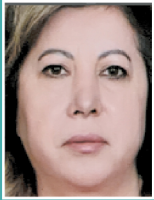


BZT TURAN

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ASSISTANT PROFESSOR ŞENGÜL BÜYÜKBOYACI



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Preface

Education has long been recognized as one of the most powerful forces shaping societies, economies, and cultural identities. Throughout history, educational institutions and policies have not merely transmitted knowledge; they have played a decisive role in transforming social structures, fostering economic development, and constructing collective visions of the future. In an increasingly complex and interconnected world, the relationship between education, development, and social transformation has become more significant than ever.

This volume, *Education, Development, and Social Transformation: Interdisciplinary Perspectives*, brings together scholarly contributions that examine this relationship from diverse academic perspectives. The chapters included in this book explore how educational ideas, policies, and practices interact with broader processes of social change, economic development, technological innovation, and nation-building. By approaching education as both a historical phenomenon and a contemporary field of transformation, the book seeks to contribute to ongoing academic debates concerning the role of education in shaping modern societies.

The contributions in this volume cover a wide range of themes, including historical analyses of educational reforms, discussions on the relationship between education and development, studies on language education and learning processes, and examinations of emerging technological paradigms such as artificial intelligence. Despite the diversity of topics, all chapters share a common analytical perspective: the understanding that education is not an isolated institutional domain but a dynamic field closely intertwined with political, economic, cultural, and technological developments.

A central theme running throughout the book is the recognition that educational systems both influence and are influenced by broader processes of social transformation. In many societies, educational reforms have served as catalysts for modernization, economic growth, and social mobility. At the same time, educational institutions must continuously adapt to new societal

needs, technological innovations, and global challenges. Understanding this reciprocal relationship is essential for developing effective educational policies and sustainable development strategies.

Another important dimension addressed in this volume is the interdisciplinary nature of educational research. Contemporary educational challenges cannot be fully understood through a single disciplinary lens. Rather, they require insights from history, sociology, economics, political science, linguistics, and emerging technological fields. By bringing together contributions from different academic traditions, this book aims to foster a more comprehensive understanding of how education functions as a transformative force in society.

The editors hope that this volume will serve as a valuable resource for researchers, educators, policymakers, and graduate students interested in the complex relationship between education, development, and social transformation. It is also our expectation that the discussions presented in this book will inspire further interdisciplinary dialogue and contribute to the development of innovative approaches to educational research and policy.

Ultimately, the chapters included in this volume demonstrate that education remains one of the most significant instruments for shaping the future of societies. Whether through historical reforms, pedagogical innovations, or technological advancements, education continues to play a central role in addressing the social, economic, and intellectual challenges of the twenty-first century.

Editor

Asst. Prof. Dr. Şengül BÜYÜKBOYACI

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Yasin Demirci

CHAPTER 1

An Examination of Language Anxiety and Cultural Adaptation among Foreign Students in the Context of Language Skills

Zeynep Arıcı¹

Abstract

Learning a foreign language is a multifaceted journey that transcends mere linguistic acquisition, encompassing profound affective, social, and psychological dimensions. For international students, mastering the local tongue is not just an academic hurdle; it is a vital lifeline for navigating daily life, building meaningful social networks, and fostering a genuine sense of belonging within a new cultural landscape. Central to this experience are affective variables, which significantly shape both educational outcomes and cultural integration. Among these, language anxiety stands out as a formidable barrier. Characterized by a persistent fear of making mistakes and a sensitivity to negative evaluation, this anxiety often leads to communication avoidance. Research consistently highlights that these feelings are most acute during productive tasks—speaking and writing—where learners must actively manifest their thoughts. Simultaneously, cultural adaptation—the process of internalizing social norms and establishing a foothold in a new society—interacts deeply with linguistic progress. When adaptation is sluggish or difficult, anxiety levels often spike, creating a cycle that hinders fluency. This study explores

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the intricate relationship between language anxiety and cultural adaptation across the four core skills: reading, writing, listening, and speaking, providing a comprehensive theoretical and qualitative review of existing literature.

Keywords: Cultural adaptation, language anxiety, language skills. learning Turkish,

Introduction

Globalization and increasing international mobility have led to a significant rise in the number of students traveling to different countries for educational purposes. This development has transformed foreign language learning from a purely academic requirement into a process that directly affects individuals' daily lives, social relationships, and psychological well-being. For students learning Turkish as a foreign language, the language learning process progresses alongside efforts to exist in a new cultural environment, express oneself effectively, and participate in social interactions.

One of the most important affective variables encountered in the foreign language learning process is language anxiety. Horwitz, Horwitz, and Cope (1986) define language anxiety as a combination of communication apprehension, test anxiety, and fear of negative evaluation, and emphasize that this type of anxiety intensifies particularly in situations that require active language use (pp. 127–129). Krashen's (1985) Affective Filter Hypothesis further demonstrates that anxiety hinders the processing of language input and slows down the learning process (pp. 3–5). Learners experiencing high levels of anxiety may not be sufficiently open to the input presented in the learning environment and tend to participate in the learning process in a more passive manner.

Studies conducted with learners of Turkish as a foreign language indicate that language anxiety is particularly concentrated in productive language skills such as speaking and writing. Bozavlı (2017) reports that speaking anxiety restricts students' classroom interactions, while Işcan (2015) reveals that fear of negative evaluation related to writing increases writing anxiety. Content analysis studies in the literature also demonstrate that research on language anxiety predominantly focuses on speaking and writing skills, whereas listening and reading skills are examined to a relatively lesser extent (Polatcan, 2018).

Another important dimension of the language learning process is cultural adaptation. Cultural adaptation encompasses the process through which individuals understand social norms, establish social relationships, and develop a sense of belonging within a new cultural environment (Berry, 1997, pp.

10–15). Ward, Bochner, and Furnham (2001) emphasize the decisive role of social relationships and communication opportunities in the cultural adaptation process (pp. 45–54). Studies conducted in the Turkish context similarly reveal that foreign students experience feelings of loneliness, stress, and anxiety during the cultural adaptation process (Şahin & Demirtaş, 2014).

A review of the literature shows that language anxiety and cultural adaptation are generally addressed under separate headings and that the interaction between these two variables is discussed only to a limited extent. However, for foreign students, language anxiety and cultural adaptation display a cyclical structure in which they mutually influence and reinforce one another. In this regard, the present study aims to address the interaction between language anxiety and cultural adaptation among learners of Turkish as a foreign language on the basis of language skills, thereby seeking to fill an important gap in the literature.

Method

This study is designed as a descriptive and theoretical investigation within the framework of qualitative research. Descriptive and theoretical studies aim to reveal the current state of a particular phenomenon and to make visible the relationships among theoretical approaches presented in the existing literature, rather than generating empirical data through fieldwork. Such studies primarily focus on the systematic examination of previous research and the deepening of the conceptual framework (Creswell, 2013, pp. 44–45; Grant & Booth, 2009, pp. 91–94).

The data sources of the study consist of national and international academic publications published in the fields of foreign language anxiety, cultural adaptation, and Teaching Turkish as a Foreign Language. In this context, the literature reviewed includes theoretical studies on language anxiety, research conducted with learners of Turkish as a foreign language, scale development and content analysis studies examining the relationship between language anxiety and language skills, as well as studies investigating cultural adaptation and related psychosocial processes. During the literature review process, priority was given to studies published in peer-reviewed academic journals, and particular attention was paid to ensuring a balanced representation of Turkish and international sources.

The document corpus of the study comprises academic works that address language anxiety and cultural adaptation in the context of foreign students. The selection of documents was based on the following criteria: focusing on learners of Turkish as a foreign language, addressing language anxiety, cultural adaptation, or the relationship between these two variables, being associated

with at least one language skill (reading, writing, listening, or speaking), and being published in peer-reviewed academic journals. The studies selected according to these criteria were evaluated in a manner that would contribute to the construction of the theoretical framework of the present study

The data collected within the scope of the study were analyzed using descriptive analysis. Descriptive analysis is an analytical approach that aims to classify and interpret data in accordance with predetermined themes (Yıldırım & Şimşek, 2021). In the present study, the data were analyzed within the framework of the following themes: the general characteristics of language anxiety, the relationship between language anxiety and reading, writing, listening, and speaking skills, the effects of the cultural adaptation process on language learning, and the cyclical relationship between language anxiety and cultural adaptation. The findings obtained from this analysis were evaluated comparatively with similar studies in the literature and interpreted within the context of Teaching Turkish as a Foreign Language.

Research Ethics

This study was conducted in accordance with the principles and standards of scientific research and publication ethics specified in the Directive on Scientific Research and Publication Ethics of Higher Education Institutions. None of the actions defined under the section entitled “Actions Contrary to Scientific Research and Publication Ethics” were committed during the conduct of this study.

Language Anxiety Across Language Skills

The impact of language anxiety on language skills has not been addressed equally in the literature; instead, a clear research tendency has emerged that concentrates on specific skills. Content analysis and review studies indicate that language anxiety is most frequently associated with productive language skills, particularly speaking and writing. In Polatcan’s (2018) study, which examined research conducted in the field of Teaching Turkish as a Foreign Language, it was found that a substantial proportion of studies focusing on language anxiety addressed speaking (36.36%) and writing (22.72%) skills, whereas reading (13.63%) and listening (9.09%) skills were examined to a relatively lesser extent. This distribution reveals that language anxiety becomes more visible particularly in situations that require learners to actively produce language.

This tendency in the literature suggests that language anxiety should not be regarded solely as an individual affective state, but rather as a phenomenon that intensifies in contexts characterized by perceived evaluation, social visibility, and a high risk of making mistakes. Speaking and writing skills stand out as areas in which anxiety is experienced more intensely, as learners' performance is displayed either immediately or in a permanent form. In contrast, reading and listening skills are generally considered domains in which anxiety is experienced in a more implicit manner, due to their relatively passive and individual nature. This distinction indicates that language anxiety is closely related to both the structure of the learning environment and the inherent characteristics of each language skill.

Within this framework, identifying the distribution of language anxiety across language skills is important not only for revealing research trends in the literature but also for determining which skills are more strongly associated with the cultural adaptation process. In particular, the fact that speaking and writing skills are directly linked to social interaction and academic visibility suggests that anxiety experienced in these skills may have a more pronounced impact on learners' cultural adaptation.

Cultural Adaptation in the Context of Language Anxiety and Language Skills

Language anxiety is a multidimensional affective variable that influences all language skills in the foreign language learning process; however, the intensity of this influence does not manifest equally across different skill areas. The literature indicates that language anxiety is experienced in a more visible and intense manner particularly in productive language skills such as speaking and writing, whereas it tends to emerge in a more implicit form in receptive skills such as listening and reading (Horwitz, Horwitz, & Cope, 1986, pp. 127–129; MacIntyre & Gardner, 1994, pp. 289–292).

Speaking skill is widely regarded as the language skill in which language anxiety is experienced most intensely. Horwitz et al. (1986) emphasize that language anxiety increases especially in situations requiring oral communication, where learners experience fear of making mistakes and concern about negative evaluation (pp. 128–131). Studies conducted with learners of Turkish as a foreign language support this view. Bozavlı (2017) reports that speaking anxiety restricts students' willingness to participate in classroom discourse, deliver presentations, and interact with instructors (pp. 1128–1130).

These studies clearly indicate that learners experience confusion during speaking, have difficulty expressing their thoughts, and fear making pronunciation errors. This situation demonstrates that speaking anxiety is not merely a linguistic issue but is also directly related to social interaction and cultural acceptance. Anxiety experienced in speaking skill may lead learners to withdraw from social environments, thereby weakening the cultural adaptation process (Ward, Bochner, & Furnham, 2001, pp. 45–50).

Writing skill emerges as an area in which language anxiety is experienced in a less visible yet more persistent manner. Cheng (2004) notes that writing anxiety intensifies particularly because written products are permanent and subject to academic evaluation (pp. 313–316). Studies conducted in the context of learners of Turkish as a foreign language similarly reveal that writing anxiety negatively affects students' perceptions of academic achievement (İşcan, 2015, pp. 568–571).

Findings related to writing skill indicate that learners tend to avoid written production due to fear of making mistakes, anxiety about failing to meet academic expectations, and unfamiliarity with culturally embedded norms of written expression. This suggests that writing anxiety is closely associated with the cultural adaptation process, particularly in terms of academic adaptation. Anxiety experienced in writing may prevent learners from becoming visible in academic settings and may weaken their sense of belonging.

Although listening skill has received relatively limited attention in the literature on language anxiety, it is closely related to the cultural adaptation process. The identification of listening anxiety as a distinct dimension in the four-skill-based language anxiety scale developed by Köylü and Işık (2019) highlights the affective importance of this skill (pp. 123–125).

For foreign students, factors such as rapid speech, unfamiliar accents, and culturally specific oral expressions may complicate the listening process. Research findings indicate that learners experience fear of misunderstanding and therefore adopt a passive stance in social settings. This situation suggests that anxiety related to listening skill may hinder learners' ability to interpret cultural cues adequately and may slow down the process of social adaptation.

Reading skill, while generally considered an area in which language anxiety is experienced at a relatively lower level, is associated with feelings of cultural unfamiliarity, particularly in the context of academic texts. Saito, Horwitz, and Garza (1999) argue that reading anxiety is closely related to cultural references and textual structures in the foreign language (pp. 203–205).

Findings regarding reading skill reveal that learners experience difficulty in understanding culturally specific concepts presented in academic texts, which indirectly affects their academic adaptation process. These challenges experienced in reading skill may be regarded as a less visible yet influential area of anxiety that complicates learners' adaptation to academic life.

Discussion

This study examined the interaction between language anxiety and cultural adaptation among foreign students within the context of language skills and evaluated the findings within a holistic framework based on the existing literature. The results indicate that language anxiety affects all language skills among learners of Turkish as a foreign language; however, the intensity of this effect varies across different skill areas. In particular, speaking and writing emerge as the skills in which language anxiety is experienced most intensely.

These findings largely align with previous studies in the literature. Horwitz, Horwitz, and Cope's (1986) conceptualization of language anxiety in relation to communication apprehension and fear of negative evaluation demonstrates that anxiety intensifies particularly in situations requiring oral communication. Similarly, studies by Bozavlı (2017) and Ameen and Uslu Üstten report that foreign students experience high levels of anxiety during speaking activities, which restrict both classroom interaction and social communication. The present study likewise reveals that language anxiety experienced in speaking skill leads students to withdraw from social environments, thereby negatively affecting the cultural adaptation process.

Findings related to writing skill also show strong parallels with the literature. Cheng (2004) and İscan (2015) emphasize that writing anxiety, particularly in academic contexts, negatively influences students' performance perceptions and self-efficacy. In the present study, anxiety experienced in writing skill was found to cause students to avoid expressing themselves in academic settings and to complicate the academic adaptation process. This finding indicates that language anxiety is not merely a linguistic issue but a phenomenon with significant academic and cultural dimensions.

The findings concerning listening and reading skills point to a notable gap when compared with the limited number of studies addressing these skills in the literature. As highlighted in Polatcan's (2018) content analysis, the majority of language anxiety research focuses on speaking and writing skills, while listening and reading receive comparatively less attention. In this study, listening and reading skills were found to exhibit an indirect yet meaningful relationship with cultural adaptation. In particular, anxiety experienced in

listening skill was evaluated as slowing down the social adaptation process by hindering students' ability to interpret culturally specific oral expressions.

Furthermore, this study demonstrates that the relationship between language anxiety and cultural adaptation is not unidirectional but rather reciprocal and cyclical. While language anxiety restricts students' social and academic interactions, difficulties encountered in the cultural adaptation process reduce learners' confidence in using the language and further intensify anxiety. In this respect, the study differs from research that treats language anxiety and cultural adaptation as independent variables and offers an original contribution to the field by addressing these concepts through a holistic, skill-based perspective.

Conclusion and Implications

By examining the interaction between language anxiety and cultural adaptation in relation to language skills, this study has yielded important implications for the field of Teaching Turkish as a Foreign Language. The findings indicate that language anxiety is particularly concentrated in speaking and writing skills and that anxiety experienced in these skills limits students' social and academic engagement, thereby negatively affecting the cultural adaptation process. In listening and reading skills, anxiety appears in a more implicit manner; however, it maintains an indirect relationship with learners' ability to interpret cultural contexts.

The results suggest that language anxiety and cultural adaptation should not be treated as independent variables in the foreign language learning process. Accordingly, in Teaching Turkish as a Foreign Language, instruction should be planned not only around linguistic competencies but also by taking into account learners' psychosocial needs and cultural adaptation processes. Creating safe learning environments, viewing errors as a natural part of learning, and providing supportive contexts in which students can express themselves freely are particularly important in activities related to speaking and writing skills.

The study offers important implications not only for teachers and educational institutions but also for social work professionals. Empowerment-based approaches, peer support systems, and psychosocial interventions may be considered effective tools for reducing language anxiety and supporting cultural adaptation among foreign students. In this regard, adopting an interdisciplinary perspective and strengthening collaboration between education and social work are strongly recommended.

Finally, this study reveals that research addressing the relationship between language anxiety and cultural adaptation in the context of listening and reading skills remains limited in the literature. Future research is encouraged to increase both qualitative and quantitative studies focusing on these skills and to conduct comparative analyses involving different learner profiles and learning contexts.

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CHAPTER 2

Document Analysis Of Research On Physics Misconceptions At High School And University Levels: A General Overview

Çiğdem Mertoğlu¹

Abstract

Determining students' readiness levels in the educational process is of critical importance for a qualitative learning experience. Especially in fields like physics education, where abstract concepts are prevalent, students enter the learning environment with intuitive and prior beliefs formed by observing their surroundings. These structures, expressed in the literature through various terms such as "alternative conceptions," "preconceptions," or "children's science," often conflict with scientific facts and constitute "misconceptions." According to the constructivist approach, learning is a cumulative process, and students' existing erroneous schemas form a strong center of resistance in the meaningful interpretation of new scientific information. The inadequacy of traditional teaching methods in transforming these deep-rooted structures leads students to perceive scientific models as transient school knowledge rather than internalizing them. This study aims to examine research focusing on physics misconceptions at the high school and university levels through the document analysis method. Accordingly, it is intended to provide a comprehensive perspective for physics education by synthesizing the nature and continuity

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of misconceptions encountered at different instructional levels, as well as the strategies developed to remediate these misconceptions in light of the literature.

Keywords: Physics Education, Misconception, Conceptual Change, Document Analysis, High School and University Education.

Introduction

When students first encounter the natural sciences, they bring with them a series of prior beliefs and intuitive explanatory models developed through observations of their surroundings. In the literature, various terminologies have been proposed by different researchers for these structures. For instance, Novak (1977) referred to these beliefs as “pre-concepts,” Driver and Easley (1978) as “alternative frameworks,” and Helm (1980) as “misconceptions.” Similarly, terms such as “children’s science” (Gilbert et al., 1982), “common sense concepts” (Halloun and Hestenes, 1985), or “spontaneous knowledge” (Pines and West, 1986) have been utilized to define the mental schemas of children (Eryilmaz and Tatlı, 1999). Although these terms contain nuances regarding their theoretical emphasis, this study adopts the term “misconception,” in accordance with the general trend in the literature, to encompass all structures that do not align with scientific facts (Yağbasan and Gülçiçek, 2003).

In the contemporary era, the rapid advancement of science and technology has made high-quality education a necessity for societies (Başer, 1996). One of the primary ways to ensure this quality is to determine students’ readiness levels and address learning gaps; at this point, measurement and evaluation play a critical role (Gönen, 2011). However, regarding science education particularly physics concept teaching can transform into an incredibly complex and challenging process for both teachers and students.

The abstract nature of most physics concepts, combined with the fact that they do not directly overlap with daily observations (such as the absence of a frictionless environment), creates profound gaps between the scientific schemas in teachers’ minds and the structures students shape based on their own experiences. These intuitive explanations constructed by students are often diametrically opposed to modern theories and scientific models accepted by scientists. The abstract nature of physics concepts creates deep disparities between the scientific frameworks in teachers’ minds and the structures formed by students.

The learning process is inherently cumulative; students build newly encountered information upon the pre-existing knowledge in their minds. However, this construction process may not always proceed in harmony

with scientific facts. As Baki (1999) stated, students' prior experiences can sometimes lay the groundwork for the erroneous encoding of new concepts. The logic used in solving a problem or explaining a phenomenon may seem highly consistent and appropriate to the student's own cognitive schemas and past experiences. Yet, this subjective logic does not imply that the conclusion reached has scientific validity. At this juncture, misconceptions emerge beliefs that the student accepts as correct but which contradict scientific literature (Gülçiçek and Yağbasan).

A typical example of this situation has been observed in mathematics education among students taking algebra. It has been identified that students hold a general conviction, based on their arithmetic experiences, that multiplication always increases the result. This example clearly demonstrates how a student's perception of limited past experiences (multiplication with positive integers) as a universal rule acts as an obstacle when learning new and more complex information (multiplication with rational numbers). A similar situation occurs in science and physics education. Elements that a student constantly experiences in daily life, such as friction and air resistance, can become barriers that hinder the understanding of Newton's laws of motion. Consequently, misconceptions are not random errors in a student's educational life but are fundamental components of science teaching and cognitive development that must be taken into account (Baki, 1999).

To break this resistance, the mere presentation of information is insufficient. It is necessary to create cognitive conflict in the student, make them realize the inadequacy of their current thinking, and demonstrate that the scientific model is more "intelligible, plausible, and fruitful". Therefore, the failures in physics education often stem not from a lack of student capacity, but from the disregard of these prejudices and alternative structures during the instructional process.

Traditional teaching methods position the student as a passive recipient and fail to account for these deeply rooted alternative concepts. In this process, where the teacher merely transmits correct information, the student attempts to integrate new information into their existing faulty schema, which makes changing misconceptions if not impossible highly difficult (Çakır et al., 2002; Pınarbaşı et al., 2006). This situation, defined in the literature as "conceptual resistance," stems from students' overconfidence in their own models. Students are remarkably conservative regarding their misconceptions; they generally perceive new and scientific information as "temporary school knowledge" and demonstrate strong resistance to their own erroneous but functional beliefs (Schmidt, 1997).

Literature Review

Eryılmaz and Tatlı (2000) conducted a study that scrutinized the misconceptions of first-year students at METU regarding mechanics, revealing both the alignment of these misconceptions with universal literature and their resilience among high-achieving student groups. Research findings were categorized into three main domains: Aristotelian physics, impetus physics, and the interpretation of graphs. The results indicated that the belief that force is directly proportional to velocity rather than acceleration, and the misconception that an internal driving force is required to sustain motion, are remarkably prevalent. Furthermore, within the context of graphic literacy, the confusion between height and slope in position-time graphs demonstrates cognitive difficulties in interpreting mathematical representations of physical quantities. Descriptive analysis of pre-test results from 946 students and post-test results from 506 students showed substantial parallelism with international research. The data obtained by Eryılmaz and Tatlı clearly illustrate that traditional physics education is insufficient in altering students' deep-seated and intuitive misconceptions. Consequently, the study strongly emphasizes the necessity of adopting conceptual change-oriented approaches in physics instructional processes.

Atasoy and Akdeniz (2007) focused on the development and implementation of an achievement test designed to identify misconceptions concerning Newton's Laws of Motion. The reliability studies were conducted with 85 pre-service science teachers, yielding a coefficient of 0.65, after which the test was administered to 42 freshmen. The findings revealed that pre-service teachers possess numerous and deeply rooted misconceptions regarding Newton's laws. Specifically, errors such as "a force must always act on a moving object in the direction of motion" and the belief that "in collisions, the moving object exerts a greater force on the stationary one" (misconception of the Action-Reaction Law) were identified. The underlying cause of these misconceptions is the superficial memorization of concepts without meaningful internalisation. The study emphasizes that such tests should be utilized to determine the prior knowledge and reasoning patterns of candidates before instructional processes are designed.

Karakuyu and Tüysüz (2011) investigated the impact of conceptual change texts on the achievement and knowledge retention of 10th-grade students in the subject of electricity. In the study conducted with a total of 66 students, conceptual change texts were applied to the experimental group, while traditional methods were followed in the control group. Analysis of pre-test, post-test, and delayed post-test results indicated that logical thinking ability

and prior knowledge play critical roles in achievement. The findings proved that conceptual change texts are significantly more effective than traditional education in teaching electrical concepts and remediating misconceptions.

Tunç, Akçam, and Dökme (2012) aimed to identify misconceptions of pre-service elementary teachers in fundamental physics topics and examine the impact of research techniques on the results. A four-question, three-tier, and annotated multiple-choice concept test, based on the primary curriculum and prevalent misconceptions in the literature, was administered to 301 senior students at seven different faculties of education. The research findings not only demonstrated that pre-service teachers hold serious misconceptions in basic physics but also revealed that the techniques and question analysis methods preferred in misconception studies significantly influence the obtained results. In this regard, the study highlights the importance of the methodological approach in the process of detecting misconceptions.

Kara, Avcı, and Karaca (2012) conducted an in-depth examination of the knowledge and misconceptions regarding the concept of work among first-year pre-service science teachers. Three-tier questions were utilized to distinguish candidates' understandings from incomplete information, erroneous inferences, and guesses in a valid and reliable manner. The findings clearly demonstrated that pre-service teachers possess significant misconceptions regarding the concept of work. Primary reasons for these misconceptions include the inability to distinguish between the colloquial meaning of "work" and its technical definition in physics, as well as the confusion between the concepts of work and power. This research, which grouped responses based on similarities, provides a concrete illustration of the cognitive barriers future teachers face in constructing fundamental physics concepts.

Baybars and Küçüközer (2014) examined the conceptual understanding levels of pre-service science teachers in quantum physics and the impact of the instructional process on these understandings. Noting that quantum physics education in the literature is often limited to physics departments, the study was conducted with 48 candidates. Utilizing concept tests and semi-structured interviews as data collection tools, the effectiveness of visually supported teaching methods was tested. Pre-instructional evaluations identified various alternative concepts (misconceptions) regarding quantum physics. However, by the end of the instructional process, it was determined that the majority of candidates began to use scientific terms correctly and that conceptual understanding of quantum physics was successfully achieved.

Kocakülay and Abacı (2017) aimed to identify misconceptions regarding electrical circuits, particularly the concept of "potential difference," among

senior science education students. The research, covering data from 2006 to 2017, utilized an eight-question annotated multiple-choice test, with a detailed analysis of the sub-options of the fifth question focusing on potential difference. The study, conducted on 399 students at Balıkesir University, revealed that a vast majority of pre-service teachers possess similar and resilient misconceptions.

Şimşek, Yurtçan, and Oktay (2019) aimed to determine the understanding levels of pre-service science teachers regarding fundamental concepts in force and motion and to identify misconceptions in these areas. Conducted with 92 second-year students at Atatürk University during the 2016-2017 academic year, the Force and Motion Achievement Test, consisting of 20 questions, was used as the data collection tool. To support quantitative data and analyze the underlying causes of misconceptions in depth, semi-structured interviews were conducted with seven students following the test. Descriptive analyses based on the correct response rates of each question and the percentages of responses given to the options revealed that pre-service teachers hold numerous and widespread misconceptions regarding force and motion. The results offer concrete solutions for educators, researchers, and curriculum designers to remediate these misconceptions across varying levels of prevalence.

Methodology

Research Design

This study was conducted using the document analysis design, which is one of the qualitative research methods. Document analysis is a systematic process involving the examination, analysis, and evaluation of printed or electronic materials for a specific purpose (Yıldırım & Şimşek, 2011). In this research, studies focusing on physics misconceptions at the high school and university levels were synthesized through this method.

Data Sources and the Search Process

The research data consist of academic studies published between the years 2000 and 2019. To access the data, databases such as Google Scholar, DergiPark, and the YÖK National Thesis Center were searched.

Research Problem

Although the literature on misconceptions in physics education is quite extensive, existing research has generally remained limited to a narrow

subject area or a specific educational level. This situation makes it difficult to conduct a holistic analysis of conceptual transitions and the persistence of misconceptions across different instructional stages. In particular, there is a need for comprehensive syntheses that reveal the progression of erroneous schemas carried from secondary to higher education, as well as general research trends in this field. By bringing together the scattered data in the literature, this study aims to examine high school and university-level research from both thematic and methodological perspectives. In this context, the primary research problem has been formulated as: “What are the general trends in studies directed towards physics misconceptions at the high school and university levels?”

Purpose of the Study

The main objective of this research is to systematically evaluate academic studies investigating physics misconceptions at the high school and university levels using the document analysis method. In line with this general objective, the study attempts to delineate which areas of physics the research focuses on, which sample groups are studied, and which methodological approaches are preferred within a general framework. By presenting the trends in conceptual misconceptions between secondary and higher education levels through a comparative perspective, the study aims to summarize the current state of physics education and establish a guiding synthesis for future research and instructional strategies.

Findings

Findings Related to Mechanics and Newton’s Laws

The results of the reviewed studies (Eryılmaz & Tatlı, 2000; Aksoy & Akdeniz, 2007; Şimşek et al., 2019) provide evidence that students adhere to intuitive “Aristotelian” and “Impetus” models in mechanics instead of modern physics:

Force-Velocity Relationship: A vast majority of students believe that a continuous force must act in the direction of motion for an object to move (the Force = Velocity misconception).

Action-Reaction Law: The erroneous belief that in collisions, the larger or moving object exerts more force is quite prevalent, even among pre-service teachers.

Inertia: It is frequently thought that the factor enabling objects to sustain their motion is an “internal driving force.”

Findings on Electricity and Potential Difference

Research examining electricity topics (Karakuyu & Tüysüz, 2011; Kocakülay & Abacı, 2017) indicates that students struggle to concretize abstract concepts:

Potential Difference: It has been identified that pre-service teachers confuse the concept of “potential difference” with current or energy, leading to a misunderstanding of voltage in a circuit.

Conceptual Resistance: It was observed that the misconceptions of students taught through traditional methods regarding electrical circuits remained largely unchanged even after testing.

Findings Related to the Concepts of Work and Energy

Analyses by Kara, Avcı, and Karaca (2012) highlight the conceptual barriers created by linguistic confusion:

Influence of Everyday Language: It was found that students identify the act of physical exhaustion in daily life with physical work, ignoring the requirement for displacement in the direction of force for work to occur in a physical sense.

Work-Power Confusion: The interchangeable use of the terms “work” and “power” hinders students’ ability to comprehend energy transformations.

Quantum Physics and the Level of Abstraction

The study by Baybars and Küçüközer (2014) emphasizes the importance of visualization in quantum physics, one of the most abstract fields of physics:

Pre-Instructional Status: It was observed that students attempt to explain quantum physics terms through the logic of classical physics, confusing the laws of the micro-universe with those of the macro-universe.

Post-Instructional Development: It was determined that scientific understanding increased even in a complex field like quantum physics through visual materials and interactive teaching.

Methodological Findings

The study by Tunç et al. (2012) revealed the impact of research techniques on outcomes. The type of test utilized (e.g., multiple-choice vs. three-tier) alters the depth and type of the detected misconception. Three-tier tests highlight genuine misconceptions more clearly by eliminating random or lucky guesses.

Discussion

The literature reviewed within the scope of this study confirms that misconceptions in physics education are not merely individual errors; rather, they are resilient, universal, and deeply rooted alternative explanations within the student's cognitive structure. In light of the findings, the following fundamental conclusions are presented for discussion:

Universality and Resilience of Misconceptions

A common denominator across the reviewed studies is that students possess similar misconceptions regardless of their academic achievement levels or educational stages. Data presented by Eryılmaz and Tatlı (2000) and Şimşek et al. (2019) demonstrate that remnants of “Aristotelian physics” and “Impetus theory” persist across a wide spectrum, from high-achieving university students at METU to pre-service science teachers. This situation proves that daily life experiences (e.g., friction, air resistance) take precedence over scientific theories (e.g., Newton's laws), and students tend to “protect” these intuitive schemas.

Conflict Between Everyday Language and Scientific Language

The research by Kara, Avcı, and Karaca (2012) and Kocakülay and Abacı (2017) reveals that linguistic confusion is a significant source of misconceptions. The colloquial meanings of concepts such as “work,” “power,” and “potential difference” often override their physical definitions, causing scientific knowledge to remain as “superficial school knowledge.” As noted by Aksoy and Akdeniz (2007), since students prefer rote memorization over conceptual internalisation, new information is erroneously constructed upon existing faulty schemas.

Importance of the Methodological Approach

The findings of Tunç et al. (2012) are critical in showing that the technique used to detect misconceptions directly influences the results. The literature increasingly emphasizes that single-tier multiple-choice tests may be insufficient in capturing the deep-seated misconceptions in a student's mind; therefore, the use of open-ended or three-tier tests is of paramount importance.

Role of Conceptual Change and Visualization

The investigations of Karakuyu and Tüysüz (2011) and Baybars and Küçüközer (2014) provide evidence that traditional teaching methods fail to remediate misconceptions, whereas conceptual change texts and visually supported materials make a significant difference. Achieving success even in a highly abstract field like quantum physics through visualization and correct methodology indicates that a paradigm shift in physics education is mandatory.

Conclusion and Suggestions

Conclusions

Based on the documents reviewed and the analyses conducted within the scope of this study, the following fundamental conclusions have been reached:

Prevalence and Persistence of Misconceptions: It has been observed that misconceptions in physics education maintain their existence at every level, from primary to university education. Particularly in fundamental topics such as Newton's laws of motion and electrical circuits, it was identified that students regardless of their academic achievement fall into similar intuitive errors (remnants of Aristotelian and Impetus physics).

Inadequacy of Traditional Education: A vast majority of the reviewed studies prove that traditional teaching methods remain ineffective in altering the deeply rooted alternative concepts in students' minds. Instead of internalizing scientific knowledge, students encode it merely as exam-oriented "school knowledge."

Impact of Conceptual Change Tools: It has been determined that conceptual change texts, visually supported materials, and three-tier diagnostic tests achieve significantly higher success in detecting and remediating misconceptions compared to traditional methods.

Confusion of Language and Logic: The fact that students confuse the meanings of terms used in daily life such as "work, power, and force" with their physical definitions stands as one of the greatest barriers to conceptual development.

Suggestions

In light of the results obtained, the following suggestions are presented to improve the quality of physics education:

For Educators:

Readiness Analysis: Before commencing lessons, students' prior knowledge and potential misconceptions must be determined through diagnostic tests, interviews, or similar tools.

Creating Cognitive Conflict: Students should be encouraged to recognize the discrepancy between their current misconceptions and scientific facts; the scientific model should be demonstrated as more “plausible and fruitful” through experiments and simulations.

For Curriculum Developers and Researchers:

Curriculum Integration: Instructional programs should be restructured not merely on information transmission but in a way that supports conceptual change processes (e.g., through concept cartoons, change texts, etc.).

Teacher Education: Pre-service teachers should be confronted with these misconceptions during their university years, and they should be equipped with the “pedagogical content knowledge” necessary to dismantle these structures.

Methodological Diversity: In misconception research, the use of multi-tier tests that question the reasoning behind a student's answer should be popularized instead of single-tier tests.

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CHAPTER 3

An Example Study on Evaluating the Questions in the Writing Section of the Yeni İstanbul B2 Coursebook in Terms of Text Writing Methods and Techniques

Gizem Türe¹

Abstract

The Language is the most essential means of communication, functioning as a bridge that enables understanding among people. The use of language is a universal skill that distinguishes humans from other living beings and possesses a dynamic structure that sustains its existence through continuous development. Language, which maintains its presence in all domains of life, develops simultaneously through the four fundamental skills—listening, reading, writing, and speaking—in the context of teaching Turkish as a foreign language. Among these four skills, writing is the one with which foreign learners experience the greatest difficulty during its development. This is primarily because writing involves both receptive and productive dimensions of language use, and its realization requires the integration of cognitive and expressive processes. In teaching Turkish as a foreign language, writing serves as an active means of communication that enables non-verbal expression through cognitive engagement.

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The aim of this study is to evaluate the questions included in the writing sections of the *Yeni İstanbul B2 Coursebook*. In this context, the writing activities in the *Yeni İstanbul B2 Turkish Coursebook* were examined in terms of the questions included in the writing sections. The questions related to writing skills in the 18 writing sections across different themes were analyzed based on writing methods and techniques identified through the 2006 Turkish Language Curriculum and a review of the relevant literature (Coşkun, 2019; Göçer, 2017; Yıldız, Okur, Arı, & Yılmaz, 2013; Gündüz & Şimşek, 2011; Akbayır, 2010).

The findings of the analysis indicate that, when the writing questions in sections A, B, and C of each unit are examined in terms of relevant methods and techniques, a predominance of controlled writing and guided writing activities is observed. In contrast, techniques such as note-taking, summary writing, fill-in-the-blank writing, writing based on a word and concept pool, free writing, reconstructing a text in one's own words, and collaborative writing are not represented. This evaluation reveals that the number of writing activities in the writing sections of the coursebook is limited and that the existing writing tasks are concentrated primarily on two methods and techniques.

Keywords: Writing Skill, Writing Activities in Foreign Language Teaching, Text Writing Methods and Techniques, Turkish Coursebook

Introduction

Language is the most fundamental tool that enables individuals to communicate with one another. Through language, individuals shape the emotions and thoughts of their inner world with words and convey them to others. As Barın (p. 19) states, “Language is the most powerful institution that holds societies together and unites nations by transmitting ways of life, traditions, customs, and beliefs from generation to generation.” Language holds vital importance in making both the cultural continuity and academic advancement of a society possible. The use of language possesses a universal quality. After the mother tongue, foreign languages constitute one of the most essential steps that support both individual and academic development.

Among the tools used in language teaching, reading texts are among the most influential. In teaching Turkish as a foreign language, reading competence is supported through specially designed texts prepared for instructional contexts. Reading is a multidimensional process capable of fulfilling multiple functions simultaneously. As noted by Sever (1997, as cited in Balcı & Dünder, p. 260), reading—defined as a process of constructing new meaning—requires the integrated use of cognitive, affective, and psychomotor dimensions.

The ability to comprehend what is read is not limited to linguistic decoding in a foreign language; it also forms the foundation for higher-order skills such as critical thinking and problem-solving. Therefore, the effective development of reading skills plays a key role in the success of foreign language teaching programs. The cognitive depth of reading enables learners not only to acquire knowledge but also to process and integrate it into their lives.

In Turkish language teaching, language skills are generally categorized into two main groups: receptive skills (reading and listening) and productive skills (speaking and writing). As emphasized by Hezen (2009, as cited in Kurundayıoğlu & Çetin, p. 4), “An individual who has developed listening, speaking, reading, and writing skills is also capable of using Turkish correctly, effectively, and aesthetically.” As this statement suggests, all language skills—particularly reading—continuously support and reinforce one another within an integrated system.

In the process of teaching Turkish as a foreign language, coursebooks are among the most essential and fundamental instructional materials (Ulutaş & Kara, p. 2198). Therefore, the texts included in these materials, which function as a vital bridge between the learner and language development, require careful examination. The quality of the questions accompanying these texts directly guides both learners and instructors, making material design a crucial aspect of language education. One of the primary aims of language teaching is to foster critical and creative thinking skills in learners, and one of the most effective methods employed for this purpose is the question–answer technique (Kuzu, p. 60).

The aim of this study is to evaluate the questions included in the writing sections of the Yeni İstanbul B2 Coursebook. Accordingly, the writing activities in the Yeni İstanbul B2 Turkish Coursebook were examined in terms of the questions included in the writing sections. The questions related to writing skills in the 18 writing sections across different themes were identified based on the 2006 Turkish Language Curriculum and a review of relevant literature by various researchers (Coşkun, 2019; Göçer, 2017; Yıldız, Okur, Arı, & Yılmaz, 2013; Gündüz & Şimşek, 2011; Akbayır, 2010).

As a result of the analysis, the writing questions were examined according to sixteen writing methods and techniques: (1) note-taking, (2) summary writing, (3) fill-in-the-blank writing, (4) writing based on a word and concept pool, (5) free writing, (6) controlled writing, (7) guided writing, (8) dictation writing, (9) creative writing, (10) completing a text, (11) predictive writing, (12) critical writing, (13) reconstructing a text in one’s own words, (14) generating a new

text based on a source text, (15) sensory-based writing, and (16) collaborative writing.

Research Ethics

This study was conducted in accordance with the principles and standards of scientific research and publication ethics specified in the Directive on Scientific Research and Publication Ethics of Higher Education Institutions. None of the actions defined under the section entitled “Actions Contrary to Scientific Research and Publication Ethics” were committed during the conduct of this study.

2. Findings

2.1. Themes Included in the Text and the Questions in the Writing Sections within These Themes

The coursebook examined in this study is the Yeni İstanbul B2 Coursebook. The book consists of six themes. These themes are as follows: (1) Seeing the Stork in the Sky, (2) From Past to Present, (3) The Changing World, (4) News from Around the World, (5) The World of Wonders, and (6) The Unknown Journey.

2.2. Evaluation of the Questions in the Writing Sections in Terms of Text Writing Methods and Techniques

This study adopts a holistic approach and examines the Yeni İstanbul B2 Turkish Coursebook solely in terms of the questions included in the writing sections. Within the study, the 18 writing activities designed to develop writing skills each include a main question accompanied by sub-questions. The writing questions were identified based on the 2006 Turkish Language Curriculum and a review of the relevant literature conducted by researchers (Coşkun, 2019; Göçer, 2017; Yıldız, Okur, Arı, & Yılmaz, 2013; Gündüz & Şimşek, 2011; Akbayır, 2010). No specific activity or writing task was selectively sampled; rather, the relevant sections of the book were analyzed in their entirety.

- The writing methods and techniques used as the basis for analysis are defined as follows:
- Note-taking: Recording key points while listening to a speech or reading a text (Göçer, 2016).
- Summary Writing: Condensing a text without altering its main ideas and sequence (Gündüz & Şimşek, 2011).

- Fill-in-the-Blank Writing: A writing method that supports creativity by requiring learners to construct sentences appropriate to a given text (Gündüz & Şimşek, 2011).
- Writing from a Word and Concept Pool: A technique that reveals and activates learners' vocabulary and conceptual knowledge, contributing to vocabulary development (Dağtaş, 2012).
- Free Writing: Encouraging learners to express their thoughts and feelings in their own style while observing writing conventions, often by composing on one of several given topics (Ünsal, 2008).
- Controlled Writing: Writing tasks in which the structure and scope are determined by the teacher (Gündüz & Şimşek, 2011).
- Guided Writing: Classroom activities in which learners discuss a pre-determined topic, generate ideas, and reach conclusions (Gündüz & Şimşek, 2011).
- Dictation Writing: Writing activities based on what is heard or dictated (Coşkun, Taşkaya, & Bal, 2013).
- Creative Writing: Freely expressing emotions and ideas on a topic through imagination (Oral, 2003).
- Text Completion Writing: A technique often used in fictional texts, involving completing an unfinished text (Gündüz & Şimşek, 2011).
- Predictive Writing: Asking learners to make predictions about what precedes or follows a text (Coşkun, 2019).
- Critical Writing: Interpreting a topic or event from multiple perspectives and synthesizing ideas into a coherent text, requiring an inquiry-based approach (Coşkun, 2019).
- Reconstructing a Text in One's Own Words: Having learners rewrite a text in their own style without altering its theme or topic (Gündüz & Şimşek, 2011).
- Generating a New Text Based on a Source Text: Producing a new text in a different genre while preserving the main idea and purpose of the original (Coşkun, 2019).
- Sensory-Based Writing: Transforming sensory perceptions into meaningful written expression (Coşkun, 2019).
- Collaborative Writing: A cooperative writing practice in which learners work together and address different aspects of a topic (Coşkun, 2019).

The data presented in Table 1 indicate that the writing tasks in the Yeni İstanbul B2 Coursebook are predominantly structured around controlled and guided writing. In particular, the repeated use of controlled writing activities across the first six units suggests that formal accuracy and grammatical control are prioritized in the language teaching approach.

However, while some guided writing activities appear to be implemented within a controlled framework, this practice does not demonstrate a consistent or systematic progression. Although certain units incorporate both types in an attempt to support writing development gradually, this approach appears insufficient in guiding learners toward more creative and cognitively complex forms of writing.

Table 1. Distribution of Writing Methods and Techniques in the Yeni İstanbul B2 Coursebook

Yazma Bölümü	Kontrollü Yazma	Güdümlü Yazma	Yaratıcı Yazma	Bir Metinden Hareketle Yeni bir Metin Oluşturma	Duyulardan Hareketle Yazma	Metni Tamamlayarak Yazma	Eleştirel Yazma
1-A	X	X					
1-B		X	X			X	
1-C	X	X					
2-A	X						
2-B	X	X					
2-C	X		X	X			
3-A	X						
3-B	X		X	X			
3-C		X					
4-A	X	X					
4-B			X	X			
4-C	X						X
5-A	X	X	X	X			
5-B	X						
5-C	X						
6-A	X	X					
6-B	X	X					
6-C	X	X					

According to the table, it can be observed that types such as creative writing, generating a new text based on a source text, and critical writing are represented at very low levels. In particular, the absence of sensory-based writing clearly indicates a neglect of the experiential and affective dimensions of writing skills. Similarly, critical writing appears to be confined to a limited number of units, suggesting an uneven distribution that is insufficient for developing learners' questioning and evaluative capacities.

On the other hand, although the inclusion of certain techniques—such as text completion and creative writing—introduces a degree of variation in content, this distribution reflects a fragmented structure rather than a systematically planned developmental progression.

2.3. Evaluation of the Writing Sections in the Coursebook in Line with Writing Methods and Techniques

In Unit 1A, the writing activity included in the writing section is as follows:

YAZMA

9 Ülkemizdeki turizm hakkında bir yazı yazalım.

- Ülkenizde hangi turizm çeşitleri vardır?
- Hangi mevsimde ve hangi nedenlerle ülkenize turist gelmektedir?
- Ülkenizdeki yıllık turist sayısını verilerle açıklayınız.
- Turizmin ülkenize faydası ya da zararları var mı, varsa nelerdir? Kısaca açıklayınız.
- Siz hangi turizm çeşidini tercih ediyorsunuz? Hangi sebeplerle başka bir ülkeyi ziyaret ediyorsunuz?

The question associated with the activity is structured based on controlled writing and guided writing methods and techniques. In the writing section of 1B, an advertisement is provided.

YAZMA

12 Bir gezi forumunda ülkenize gelmek isteyen biri sizden ülkenizle ilgili bilgi istiyor. Mesajı cevaplayalım ve ülkemizi tanıtalım.



Merhaba "geziyorum.com" ailesi! Şimdiye kadar bu site sayesinde pek çok ülkede çok güzel yerler gördüm. Nisan ayında (ülke) gidiyorum. Bir ay kalacağım. Bu ülkedeki üyelerden bana tavsiye vermelerini istiyorum. Nisan ayında orada hava nasıl? Yanıma nasıl kıyafetler alayım? Sizde hangi şehirleri görmeliyim? Otelde kalmak mı daha hesaplı yoksa ev mi kiralalmalıyım? Konaklama için önerilerinize açığım. Ben tarihi yerleri gezmeyi çok seviyorum. Hangi müzelerle gitmemi tavsiye edersiniz? En önemlisi tabii ki yemekler! Ülkenizdeki en lezzetli yemekleri nerede yiyebilirim? Hangi yemekleri denemeliyim? Lütfen gezimi planlamak için bana yardım edin. Son olarak nisan'da benimle buluşmak, bir kahve içmek ve ülkenizi bana tanıtmak isterseniz lütfen bana mesaj atın. Şimdiden herkese teşekkürler!

Kullanıcı: @josephdünyayigeziyor

Figure 2. Image of the Unit 1B Writing Section



Yanıt:

Sevgili @josephdünyayıgeziyor, benim ülkeme gelmene çok sevindim. Sitedeki fotoğraflarını takip ediyorum ve çok beğeniyorum. Seni restoranıma davet ediyorum. En güzel yemekleri benim restoranımda yiyebilirsin. Ayrıntılar için sana mesaj atıyorum. Nisanda görüşürüz!

Kullanıcı: @gezginşef

Yanıt:

Sizin Fotoğrafınız

Figure 3. Image of the Unit 1B Writing Section

The activity is structured based on the methods and techniques of generating a new text from a source text, text completion writing, and creative writing. The question in the writing section of 1C is as follows:

YAZMA

9 Sizden okulunuzdaki öğrenci dergisi için bir gezi yazısı yazmanızı istediler. Son iki yıl içinde gittiğiniz bir yer hakkında aşağıdaki tablodan yararlanarak bir gezi yazısı yazalım.

Paragraf 1: Bu yer neresi? Nerede bulunuyor? Oraya siz nasıl ulaştınız? Ne zaman ve kimlerle gittiniz? Paragraf 2: Yerle ilgili genel bilgiler verin. Biliyorsanız tarihi ile ilgili kısa bilgiler verebilirsiniz. Varsa oraya özgü yemeklerden bahsedebilirsiniz. Paragraf 3: Siz orada nereleri gezdiniz ve neler yaptınız? İlginç bir şey yaşadınız mı? Paragraf 4: Geziniz genel olarak nasıl geçti? Başkalarına tavsiye eder misiniz?	
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Figure 4. Image of the Unit 1C Writing Section

The question associated with the activity is based on controlled writing and guided writing methods and techniques.

The writing topic in 2A is as follows:

YAZMA

13 Teknoloji olmasaydı ne olurdu? Aşağıdaki maddelerden yararlanarak bir yazı yazalım.

- Ev, okul ve iş yaşamı nasıl olurdu?
- Aile ve arkadaşlık nasıl olurdu?
- Haberleşme ve iletişim nasıl olurdu?
- Ulaşım nasıl olurdu?
- Neler yapılabilirdi? Neler yapılamazdı?



Figure 5. Image of the Unit 2A Writing Section

The activity is structured based on the controlled writing method and technique.

In the writing section of 2B, an instruction is provided:

YAZMA

13 Sosyal medya kullanımının faydaları ve zararları nelerdir? Aşağıdaki tabloyu inceleyelim ve bu konu hakkında bir metin yazalım.

Giriş Paragrafı Metninizin konusu hakkında bir giriş cümlesi yazın. Sosyal medya kullanımının iyi ve kötü yönlerinden kısaca bahsedin.
Gelişme Paragrafı 1 Sosyal medya kullanımının faydalarını açıklayın ve bu konu hakkında sayısal veriler yazın. Örnekler verin.
Gelişme Paragrafı 2 Sosyal medya kullanımının zararlarını açıklayın ve bu konu hakkında sayısal veriler yazın. Örnekler verin.
Sonuç Paragrafı Düşüncelerinizi ana hatlarıyla özetleyin. Sizce sosyal medya kullanımının en önemli faydaları ve zararları neler? Yazın.



Figure 6. Image of the Unit 2B Writing Section

The question associated with the activity is based on controlled writing and guided writing methods and techniques.

In the activity included in the 2C writing section:



Figure 7. Image of the Unit 2C Writing Section

14 Aşağıdaki adımları takip edelim. Nasıl araba kullanılır? Okuyalım.

10 Adımda Araba Kullanmak

1. Aracın şoför koltuğuna oturun ve emniyet kemerinizi takın.
2. Koltuğu rahat bir şekilde ayarlayın.
3. Arabanın sağında ve solundaki aynaları kendinize göre ayarlayın.
4. Dikiz aynasını ayarlarken arka camı ortalayabilirsiniz.
5. Vitesi kontrol edin. Vites kolunu sağa sola hareket ettirin. Sağa ve sola rahat hareket ediyorsa vites boşta.
6. Arabanın anahtarını kontakta takın ve çevirin.
7. Ayağınızın altında üç adet pedal vardır. Bunlar soldan sağa doğru debriyaj, fren ve gaz pedallarıdır. Sol ayağınızı debriyaj pedalına, sağ ayağınızı ise fren ve gaz pedallarına basmak için kullanın.
8. Sol ayağınızı sonuna kadar debriyaja, sağ ayağınızı da frene basın.
9. İki koltuğun arasında bulunan el frenini aşağıya indirin.
10. Aracı birinci vitese alın. Sol ayağınızı yavaşça debriyajdan çekerken sağ ayağınızı frenden kaldırın ve hafifçe gaz pedalına basın. Araba hareket edecektir.



15 Zarf fiilleri (-DiğİnDİ, -Diğİ sırada/zaman, -AcAğİ zaman/sırada) kullanarak bir paragraf oluşturalım, metni tekrar yazalım.

.....

.....

Figure 8. Image of the Unit 2C Writing Section

The activity is structured based on controlled writing and writing derived from a source text methods and techniques.

The question included in the writing section of 3A is as follows:

YAZMA

Yaratıcı yazma türüne verileri/maiale/duumda birlikte/ Tam tersine/ Çünkü..)

19 Aşağıdaki soruları göz önünde bulundurarak kısa bir metin yazalım.

1. Paragraf: Moda hakkında genel görüşleriniz

Modayı takip ediyor musunuz?
 Moda denince aklınıza ne geliyor?
 Modayı nereden takip ediyorsunuz?
 Günümüzde hangi modacıları tanırıyorsunuz?

2. Paragraf: Giyim tarzınız

Okula gelirken hazırlanmak için ne kadar süre harcıyorsunuz?
 Ne kadar süredir aynı saç stilini kullanıyorsunuz?
 Kendinize ait bir tarzınız / stiliniz var mı?
 Kıyafetleriniz ya da saç stiliniz yüzünden insanlardan kötü bir tepki aldınız mı?

3. Paragraf: Alışveriş tercihleriniz

Ne kadar sıklıkla alışveriş yapıyorsunuz?
 Nereden alışveriş yapıyorsunuz? (alışveriş merkezi, butikler, semt pazarlar vb.)
 Alışveriş yapmak için ne kadar süre harcıyorsunuz?



Figure 9. Image of the Unit 3A Writing Section

The question associated with the activity is based on the controlled writing method and technique.

The activity included in the writing section of 3B is as follows:

YAZMA

Yeni Bir Beslenme Mümkün Mü?

Son yıllarda özellikle Batılı ülkelerde yaygınlaşan bir beslenme türü var: Veganlık ve Vegetaryenlik. Vegetaryenler et ürünlerini, veganlar ise hayvansal hiçbir ürünü tüketmiyor. Yani et, süt ve yumurta diyetlerinin dışında kalıyor. Bu diyetleri uygulayanlar hayvansal ürün tüketmemenin daha sağlıklı olduğunu iddia ediyor. Onlara göre insanlar ilk önce sadece sebzeler, meyveler ve tohumlarla besleniyordu. Zamanla beslenme biçimimizi değiştirdik ve et yemekle başladık. Bu değişiklik hastalıkları da beraberinde getirdi. Üstelik bazı araştırmalar bu fikri destekliyor ve hayvansal ürünleri tüketmeyi bırakarak şeker hastalığı, kanser, obezite ve kalp rahatsızlıklarını önleyebileceğimizi belirtiyor. Özellikle veganlar bu diyeti sadece sağlıklı olduğu için değil aynı zamanda etik sebeplerle sürdürüyor. Onlara göre hayvanları tüketmek için lezzet dışında hiçbir sebebimiz yok ve bu hayvanlara haksızlık. Herkesin sorduğu "Peki ya proteini nereden alacağız?" sorusuna da cevapları var: Proteinin kaynağı bitkilerdir. Ayrıca hayvansal ürünler tüketmek gezegenimiz için de zararlı. Büyük hayvan üretimi çiftlikleri doğaya zarar veriyor.




19 Paragrafı okuyalım ve bu konudaki görüşlerimiz hakkında aşağıdaki sorulara cevap vererek bir metin yazalım.

- Yukarıdaki paragraftaki görüşlere katılıyor musunuz?
- Sizce Vegan / Vegetaryen beslenme insan sağlığı için zararlı mı, faydalı mı?
- Siz bu beslenme türlerini denediniz mi? Denediyseniz tecrübeleriniz nasıl?
- Ülkemizde bu beslenme türleri yaygın mı?
- Etrafımızda böyle beslenen insanlar var mı? Onlarla bu konu hakkında hiç konuştunuz mu?
- Sizce bu beslenme türleri gelecekte daha fazla insan tarafından uygulanacak mı?

Figure 10. Image 1 of the Unit 3B Writing Section

The activity is structured based on the controlled writing method and the technique of generating a new text from a source text.

In the activity included in the writing section of 3C:

YAZMA

- 13 Aşağıdaki türkünün sözlerini uygun şekilde tamamlayalım. Daha sonra türküyü araştıralım. Dinledikten sonra cevaplarımızı kontrol edelim.

anda / hâldeyim / handa

Aşık Veysel- Uzun İnce Bir Yoldayım

Uzun ince bir yoldayım
Gidiyorum gündüz gece
Bilmiyorum ne (1)
Gidiyorum gündüz gece

Dünyaya geldiğim (2)
Yürüdüm aynı zamanda
İki kapılı bir (3)
Gidiyorum gündüz gece



- 12 Aşağıdaki konuları inceleyelim. İstedığımız konuyla ilgili bir şiir ya da şarkı yazalım.

- Pazartesi günleri
- Özlem
- Ayrılık
- Türkçe öğrenmek
- Pazar sabahları
- Bir günüm
- Aşk
- Arkadaşlık
- Evlilik

Figure 11. Image of the Unit 3C Writing Section

The activity is structured based on guided writing and free writing methods and techniques.

The topic and subtopics in the writing section of 4A are as follows:

YAZMA

- 17 Okuma bölümünde yer alan haber metinlerine bakalım. Bir suç haberi yazalım.

- Suç neydi? Olay nerede ve ne zaman yaşandı?
- Kim ya da kimler suçluydu?
- Suçun cezası neydi?
- İnsanların bu olaya tepkisi ne oldu?



Ana Başlık
.....
Alt başlık
.....
Olay/Geçmiş olaylar
.....
Yorumlar/ Sonuçlar/ Beklentiler
.....

Figure 12. Image of the Unit 4A Writing Section

The topic and questions associated with the activity are structured based on controlled writing and guided writing methods and techniques. The topic and subtopics in the writing section of 4B are as follows:

YAZMA

- 13 Aşağıdaki haber özetlerini okuyalım. Bu haberlerden birini konu alan bir hikaye yazalım.

Samsun'un Bafra İlçesinde otomobilini park ettiği yeri unutan bir vatandaş aracını üç gün sonra polis ekiplerinin yardımıyla buldu.

Şanlıurfa'dan Eskişehir'e taşınan sınıf arkadaşını ziyaret etmek için yollara düşen altı yaşındaki Mehmet üç gün sonra bir benzin istasyonunda bulundu.

Konferansa katılmak için İstanbul'dan Münih'e uçmak isteyen Alexandr Jorger yanlış uçağa binerek Bağdat'a gitti.



Figure 13. Image of the Unit 4B Writing Section

The topic and questions associated with the activity are structured based on free writing, creative writing, and writing derived from a source text methods and techniques.

The topic and subtopics in the writing section of 4C are as follows:

YAZMA

10 Katıldığınız bir etkinlik hakkında bir tanıtım ve eleştiri metni yazın. Metninizde aşağıdaki bilgilere yer verin.

Tanıtım Bölümü:

- Etkinliğin yeri, zamanı ve ücreti
- Etkinliğin içeriği: Ne tür bir etkinlikti? (İmza günü, konser, sergi açılışı, film gösterimi)
- Etkinliğe ne kadar ilgi vardı?

Eleştiri Bölümü:

- Etkinliği beğendiniz mi? Neden?
- Etkinlik sırasında neler hissettiniz? (Örnek: Sergiyi gezmek ilk önce çok keyifliydi. En sevdiğim ressamın resimlerini görmek beni çok mutlu etti. Ama sonra biraz kendimi rahatsız hissettim.)
- Bu etkinliğin iyi ve kötü tarafları nelerdi? (Örnek: Sergideki resim seçimleri çok güzeldi ama sergi çok kalabalıktı. Bu yüzden sergiyi rahatça gezmek ve resimleri detaylı olarak incelemek mümkün değildi.)
- Eleştirdiğiniz durumlar için öneriler verin. (Örnek: Sergi ziyareti için her saatte belirli sayıda ziyaretçi içeri alınabilir. Böylece kalabalık olması engellenebilir.)

Figure 14. Image of the Unit 4C Writing Section

The question associated with the activity is structured based on controlled writing, guided writing, and critical writing methods and techniques.

The topic and subtopics in the writing section of 5A are as follows:

YAZMA

GÖBEKLİTEPE

Göbeklitepe Türkiye'nin Şanlıurfa ilinde bulunmaktadır. Mısır Piramitlerinden bile daha eski olan Göbeklitepe tarihin en eski ibadet merkezi olarak kabul ediliyor. Göbeklitepe 1983 yılında bir çiftçinin toprak altında bulunduğu eski bir taş yetkililere bildirmesi ile ortaya çıkmıştır. Fakat bu taşın ve bölgenin önemi çok sonra anlaşılmıştır ve kazılara 1995 yılında başlanmıştır. Zamanla tespit edilen önemli bulgular dünya tarihini değiştirmiştir. (Bilgi Ansiklopedisi)

Göbeklitepe'deki kazıları yürüten arkeolog Klaus Schmidt'e göre bu bölgedeki insanlar tarım için değil ibadet için göçebeliği bırakıp yerleşik hayata geçmişler. Bölgede buğday kalıntıları da bulunmuş. Schmidt'e göre tapınağı inşa etmek için çalışan işçilere yiyecek ve içecek sağlamak tarımın gelişmesine sebep oldu. Yani insanlar tarım yüzünden yerleşik hayata geçmedi, inançları için tarıma başladı. (Tarih Dergisi, Ferit Çalışkan)

Klaus Schmidt: Tapınağın duvarlarında çeşitli vahşi hayvan figürleri ve heykelleri bulunuyor. Bu da tapınağın yapıldığı dönemde henüz hayvanların evcilleştirilmediğini gösteriyor. Yani insanlar o dönemde hâlâ avcılık ve toplayıcılık ile yaşıyordu. Bölgenin çevresindeki insan toplulukları tapınağa ibadet etmek için geliyordu ve ortak törenler düzenleniyordu. Göbeklitepe kültürel ve dini bir yerleşim bölgesiydi.

Göbeklitepe'nin bir inanç merkezi olduğu bilim dünyasındaki en popüler senaryo. Fakat Göbeklitepe'de henüz yeterli çalışma yapılmadı. Bölgenin farklı işlevleri olabilir ve şu anki bulgular ile kesin bilgilere ulaşamayız. (Arkeoloji Dergisi)

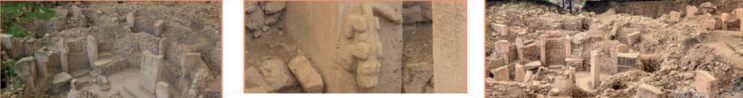


Figure 15. Image of the Unit 5A Writing Section

- 11 Yukarıdaki paragraflardan faydalanarak ve bilgilerden alıntı yaparak Göbekli Tepe hakkında bilgi veren bir araştırma metni yazınız.

Metninizde alıntı yapmak için;

- Dolaylı anlatım kullanarak kaynağı belirtebilirsiniz.
- Örnek: Schmidt, Göbekli Tepe'nin bir inanç merkezi olduğunu söylüyor.
- "göre" edatını kullanarak kaynağı belirtebilirsiniz.
- Örnek: Tarih Dergisine göre insanlar dini inançları sebebiyle tarıma başlamışlar.
- Cümleyi doğrudan anlatım ile aktararak parantez içinde kaynağı gösterebilirsiniz.
- Örnek: "Tarihi bilgilerimizin değişmesine sebep olan Göbekli Tepe Türkiye'nin Şanlıurfa ilinde bulunmaktadır." (Bilim Dergisi)

Bir "Araştırma Metni" yazmak için;

Giriş Bölümünde: Konu hakkında genel bilgiler verin. Alıntı yapmamaya ya da az alıntı yapmaya çalışın.

Gelişme Bölümünde: Detaylı bilgiler verin ve tartışmalı konulardan bahsedin. Farklı kaynaklardan görüşler ve bilgiler aktararak karşılaştırın. Bu bilgiler hakkındaki fikirlerinizi açıklayın.

Sonuç Bölümünde: Hangi görüşleri desteklediğinizi açık bir şekilde belirtin ve konu hakkındaki genel fikirlerinizden bahsedin. Bu bölümde alıntı yapmamaya çalışın.

Figure 15. Image of the Unit 5A Writing Section

The activity is structured based on controlled writing, guided writing, and the technique of generating a new text from a source text. The topic and subtopics in the writing section of 5B are as follows:

YAZMA

- 12 Yaşadığımız şehirdeki önemli bir yapının tarihini araştırılabilir ve bir internet sitesi için bu yapıyı tanıtan bir metin hazırlayabiliriz. Aşağıdaki tablo ve kalıp ifadelerden faydalanabilirsiniz.

Paragraf 1: Yaşadığınız şehirdeki önemli tarihi yapı ve bulunduğu yer/ Önemli

- Dünyanın/ şehrin en yapısıdır.
- Bu tarihi yapı yer alır.
- Bu yapı ile ünlüdür/ önemlidir.

Paragraf 2: Kim tarafından ve ne zaman inşa edildiği/ Tarihi

- tarafından yapılmıştır/ inşa edilmiştir.
- Yapımına yılında başlanan cami/ kilise/ kule yılında tamamlanmıştır.
- ile ünlü bir yapıdır.

Paragraf 3: Dış görünüşü ve mimari özellikleri

- Binanın dışında/ bahçesinde görülebilir.
- Bahçesinde bulunmaktadır.
- Ziyaret eden kişiler burada görme imkanı bulmaktadırlar.
- Bu yapı kullanılarak inşa edilmiştir.

Paragraf 4: Yapının içi ve orada yer alan eserler

- Binanın içinde/ duvarlarında/ zeminde görülebilir.
- İçeride bulunmaktadır.
- Ziyaret eden kişilerin burada görme imkanı vardır.

Paragraf 5: Ziyaret edecek kişiler için bilgiler (Ücret, ziyaret saatleri vb.)

- saatlerinde ziyarete açıktır.
- günlerinde ziyaret kapalıdır.
- kişilere indirim yapılmaktadır/ giriş ücretsizdir.
- Ziyaret etmek isteyen kişiler (ulaşım araçlarını) kullanarak buraya gelebilirler.

Figure 16. Image of the Unit 5B Writing Section

The activity is structured based on controlled writing and guided writing methods and techniques.

The topic and subtopics in the writing section of 5C are as follows:

YAZMA

9 Teknolojik ürünler zamanla insan hayatı için tehlikeli olabilir mi? İlk başlarda büyük bir ilgi ile karşıladığımız ve kullandığımız bu icatlar hayatımızı nasıl etkiliyor? Teknolojik icatların insan hayatına verdiği zararlar konusunda aşağıdaki noktaları göz önüne alarak bir metin yazalım.

- Gelişen teknoloji ile değişen kültür
- Teknolojinin getirdiği kimyasal savaşlar
- Teknolojik makinelerin insan gücü yerine kullanılması ile işsizlik oranının artışı
- Hayatımızı pratikleştiren ürünlerin zamanla sağlığımızı olumsuz etkilemesi (x-ray, mikrodalga, telefon, televizyon...)
- Değişen ve gelişen teknoloji ile tembelleşen insanlar
- Sosyal yaşamdan uzaklaşan genç nesil
- Tedavisi olmayan hastalıkların artışı



Figure 17. Image of the Unit 5C Writing Section

The activity is based on the controlled writing technique.

The topic and subtopics in the writing section of 6A are as follows:

YAZMA

11 Bir canlı hakkında araştırma yapalım. Araştırma yaparken aşağıdaki konulardan yararlanalım ve bir metin yazalım.

- Bu canlıyı araştırmak istemenizin sebebi
- Bu canlının genel özellikleri (Bu canlıyı tanıtır. Yaşadığı yer ve fiziksel özellikleri hakkında bilgi ver.)
- Bu canlıyı diğer canlılardan ayıran özellikler (Bu özelliklerden kısaca bahset.)
- Bu canlının insanlar ile ilişkisi (Örnek ver.)
- Bu canlı hakkında eklemek istediğin diğer bilgiler



Figure 18. Image of the Unit 6A Writing Section

The activity is structured based on controlled writing and guided writing methods and techniques.

The topic and subtopics in the writing section of 6B are as follows:

YAZMA

Yenilenebilir enerji, gelecek nesillerin ihtiyacı olabilecek kaynakları tüketmeden ve tehlikeye atmadan bugünkü ihtiyaçları karşılayan enerji biçimidir. Güneş, rüzgar, su yenilenebilir enerji kaynakları arasındadır.

Yenilenemez enerji kaynakları ya da fosil yakıtlar ise bir gün tükenebilecek enerji kaynaklarıdır. Bu enerji kaynakları genellikle çevre kirliliğine sebep olmalarına rağmen pek çok sektöre hammadde sağlar. Kömür, petrol ve doğal gaz yenilenemez enerji kaynaklarıdır.

13 Yukarıda iki farklı enerji kaynağı ile ilgili bilgiler verilmiştir. Araştırma yapalım ve bu iki enerji türünü karşılaştıran bir metin yazalım.

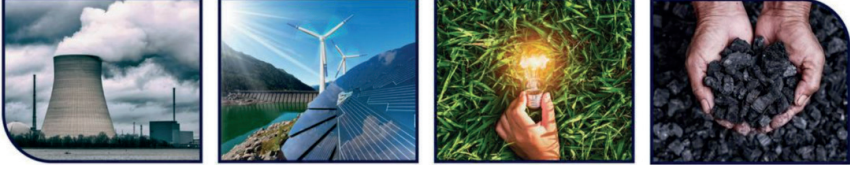


Figure 19. Image of the Unit 6B Writing Section

The activity is structured based on controlled writing and guided writing methods and techniques.

The topic and subtopics in the writing section of 6C are as follows:

YAZMA

11 İklim değişikliği hakkında bir araştırma yapalım. Aşağıdaki metni öğrendiklerimiz ve kendi fikirlerimiz ile tamamlayalım.

- Metinde yer alan bağlaçlardan sonra bir ya da iki cümle ekleyelim.
- Metnin gelişme bölümünde iklim değişikliğini önlemek için yapılan çalışmalardan bahsedelim. Bu bölümde bir ya da iki paragraf yazabilirsiniz.
- Gelişme bölümünde verdiğimiz bilgilere göre bir sonuç paragrafı yazalım.
- Metnimizi okuyup hatalarımızı düzeltelim ve metnimize uygun bir başlık bulalım.

Her geçen gün gezegenimizin farklı bir bölgesinden sel, deprem, fırtına, orman yangını gibi haberler duyuyoruz. Uzmanlar gezegenimizdeki pek çok bölgede sıcaklıkların değiştiği konusunda bizleri uyarıyor. Ayrıca

Bütün bu bilgiler iklim değişikliğini haber veriyor. İklim değişikliği gezegenimizi etkileyen en büyük tehlikelerden biridir. İklim değişikliği doğal yaşamı, hava olaylarını etkiler. Bunun yanı sıra

Bazı çevreciler ülkeleri iklim değişikliği konusunda dikkatli olmaya davet ediyor. Dünyadaki bütün ülkeler ortak adımlar atmazsa çeşitli felaketler yaşamaya devam edeceğiz. Hatta

Figure 20. Image 1 of the Unit 6C Writing Section

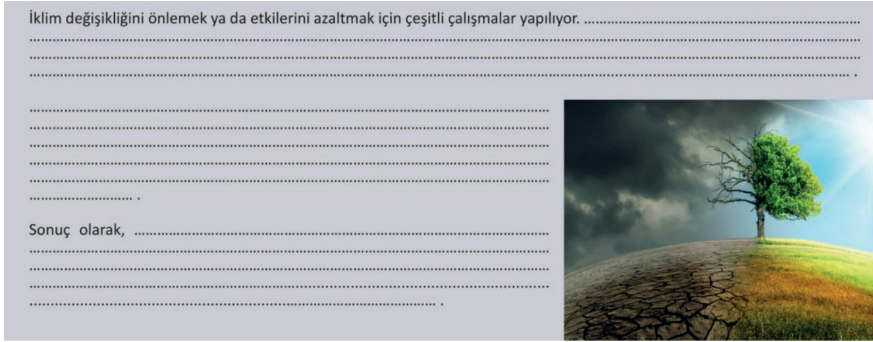


Figure 21. Image of the Unit 6C Writing Section

The activity is structured based on controlled writing and guided writing methods and techniques.

3. CONCLUSION AND EVALUATION

The process of linguistic development does not merely consist of sustained effort or continuous exposure to a language. Accordingly, learning a language solely at a technical level is insufficient. For individuals to advance their linguistic and cognitive processing to higher levels, sustained effort and self-directed engagement are required. The full development of language skills becomes possible only through such determination and continuity.

Within the scope of this study, the writing sections of the coursebook were examined holistically. The 18 writing activities included in the book consist of a main question and related sub-questions designed to develop writing skills. These writing tasks were identified in line with the 2006 Turkish Language Curriculum and relevant literature (Coşkun, 2019; Göçer, 2017; Yıldız, Okur, Arı, & Yılmaz, 2013; Gündüz & Şimşek, 2011; Akbayır, 2010). No specific activity was selectively sampled; instead, all relevant sections of the book were analyzed comprehensively.

The analysis revealed that, when the writing questions in sections A, B, and C of each unit were evaluated in terms of writing methods and techniques, emphasis was placed primarily on controlled writing, creative writing, and generating a new text based on a source text. In contrast, techniques such as note-taking, summary writing, fill-in-the-blank writing, dictation writing, text completion, predictive writing, critical writing, writing based on a word and concept pool, and free writing were largely absent. This evaluation indicates that the number of writing activities in the writing sections is limited and that

the existing tasks are concentrated around a narrow range of methods and techniques, which may lead to deficiencies in learners' cognitive processing.

From a broader perspective, the analyzed texts appear to focus predominantly on basic meaning-construction processes. Techniques such as writing from a word and concept pool, free writing, and predictive writing—which activate learners' cognitive engagement—are notably absent from the activities. Such an uneven distribution suggests that technical limitations in language use may exert a restrictive influence on the development of writing skills.

At the B2 level, which represents a transitional stage toward advanced proficiency, learners are expected to demonstrate a certain level of linguistic maturity. However, despite this advanced stage, several limitations appear to hinder the comprehensive development of writing skills. The findings indicate that even at higher proficiency levels, learners may encounter obstacles that prevent them from fully realizing their writing potential.

At the B2 level, writing activities could be enriched through tasks such as comparative writing, reconstructing texts by altering their endings, rewriting dialogues in learners' own words, responding to analytical questions, or proposing alternative sources and perspectives. The inclusion of such diverse and cognitively demanding tasks would help move beyond monotonous instructional patterns. Moreover, systematically integrating these varied activities into instructional materials would likely enhance learners' fluency in written expression.

The primary conclusion derived from this study is that the design of writing tasks in coursebooks should be structured in a way that directs learners' cognitive engagement and incorporates dynamic production-oriented processes. Writing should not be treated as a mechanical act of filling a page; rather, it should be conceptualized as an active process that mobilizes learners' knowledge and cognitive abilities.

Writing tasks should include diverse, systematic, and strategically designed activity types that foster analytical and creative thinking. Additionally, coursebook developers may enrich existing materials by supplementing lower-level writing tasks with classroom practices and additional activities that promote higher-order cognitive skills.

Although the B2 level marks a stage at which learners begin to use the language more functionally and writing skills are expected to develop more substantially, the findings indicate that the writing activities provided at this level do not sufficiently support higher-order cognitive skills. Including activities such as comparative writing, rewriting texts with altered endings, reconstructing

character dialogues in learners' own words, answering evaluative questions, or proposing alternative titles could reduce monotony in the writing process and diversify learners' linguistic production. Furthermore, systematically integrating such activities into instructional materials would contribute to improved fluency in written expression.

In conclusion, this study demonstrates that the design of writing activities in coursebooks should incorporate tasks that encourage cognitive engagement and activate analytical and creative processes. Writing activities should be structured through diverse, systematic, and multidimensional task types that support analytical, creative, and critical thinking skills. Moreover, enriching existing materials with supplementary activities that promote higher-order cognitive skills—supported through classroom practices—would make a significant contribution to the development of writing skills.

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CHAPTER 4

The Role of the İzmir Economic Congress in Shaping Early Republican Education Policy

Şengül Büyükboyacı¹

Abstract

This study examines the 1923 İzmir Economic Congress as a foundational moment not only in the formulation of Turkey's economic policies but also in the construction of the Republic's educational vision. Situating the congress within the broader trajectory of late Ottoman modernization and early Republican nation-building, the chapter argues that education was conceptualized as a strategic instrument for economic development and social transformation. Drawing upon congress proceedings, parliamentary debates, contemporary press coverage, and relevant secondary literature, the study demonstrates that the production-oriented conception of citizenship articulated at the congress provided the intellectual groundwork for subsequent Republican educational reforms. Although no separate education commission was established, discussions on vocational training, literacy, rural education, and women's participation in economic life anticipated major reforms such as the Law on the Unification of Education, the Nation Schools, the People's Houses, and the Village Institutes. From a comparative perspective, the Turkish case is evaluated alongside other state-led modernization models of the early twentieth century. The findings suggest that early Republican educational reforms constituted a

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human capital–based development strategy in which education functioned as a central mechanism of nation-building and economic productivity.

Keywords: İzmir Economic Congress, Education and Development, Early Republican Reforms, Human Capital, Nation-Building

Introduction

The modernization efforts initiated during the final century of the Ottoman Empire, particularly accelerated by the Tanzimat Edict of 1839, evolved into a multilayered process that extended beyond administrative and technical reforms and aimed at a broader social transformation. In this context, education became a central field of transformation, functioning as a key instrument shaping both the intellectual and social formation of individuals (Berkes, 1978).

Despite these reform attempts, the Ottoman Empire entered a period of severe political, military, and social disintegration in the early twentieth century. This crisis deepened through the Italo-Turkish War (1911–1912), the Balkan Wars (1912–1913), and ultimately the First World War (1914–1918), resulting in major territorial losses, population movements, economic collapse, and the depletion of qualified human resources (Zürcher, 2017). The Turkish War of Independence (1919–1922) represented not only a struggle for independence against imperial powers but also a foundational phase during which the ideological and institutional bases of a new nation-state were established.

The international dimension of the Turkish independence movement became concrete during the Lausanne negotiations initiated in late 1922. The Treaty of Lausanne in 1923 confirmed the sovereignty of the new Turkish state and marked a turning point in the country's future economic, educational, and foreign policy orientations. The foundations of an independent education system were closely linked to the educational debates that emerged during the War of Independence. Indeed, at the Congress of Education held in Ankara in 1921, Mustafa Kemal emphasized the vital importance of education for the future of the new state and argued that educational policies should be reorganized in accordance with national needs (Atatürk, *Speeches and Statements*, 1921).

With the proclamation of the Republic, the search for a new social order and economic model accelerated. The individual was no longer defined as a subject but as a productive and conscious citizen. This transformation was also reflected in debates within the Grand National Assembly of Turkey, where the close relationship between economic development and social transformation was emphasized (Parliamentary Proceedings, 1923). Within this framework, education was positioned both as a tool and as a goal of transformation

(Akyüz, 2022). Educational policies in the early Republican period were shaped within an ideological framework prioritizing national mobilization, economic development, and nation-building alongside individual development.

Within this historical and ideological context, the İzmir Economic Congress of 1923 functioned not only as a platform for determining economic principles but also as a foundational arena in which the relationship between education and the development goals of the Republic was discussed. Held between 17 February and 4 March 1923, the congress presented a comprehensive vision for shaping the citizens of the new Republic (Ökçün, 1981).

As Mustafa Kemal emphasized in his opening speech, “No matter how great military and political victories may be, they cannot endure unless crowned with economic victories” (Atatürk, Speeches and Statements, 1923). This statement highlights the central position of economic development—and therefore education—within Republican ideology. Although education was not discussed under a separate heading, the idea of raising productive citizens for economic development necessitated fundamental transformations in public education, vocational and technical education, women’s education, and agriculture-oriented curricula (Kayıran & Saygın, 2019).

The principles articulated at the congress later materialized through major reforms such as the Law on the Unification of Education (1924), the establishment of the Nation Schools (1928), the People’s Houses (1932), and the Village Institutes (1940). Therefore, the İzmir Economic Congress should be regarded not merely as an economic action plan but also as one of the key reference points shaping the educational vision of the Republic.

This chapter aims to examine how the İzmir Economic Congress of 1923 became a catalyst for structural transformation in the Turkish education system within the framework of modernization and development. The study addresses the following research question: How did the congress influence the intellectual and institutional formation of educational policies in the early Republican period?

Theoretical and Conceptual Framework

In the nation-building process of the Turkish Republic, education was not merely considered a field through which individuals acquire knowledge and skills; rather, it was regarded as a fundamental instrument for achieving social modernization, accelerating economic development, and constructing national identity. This understanding was reflected in the general spirit of the İzmir Economic Congress of 1923, where education and economic policies

were conceptualized as two complementary pillars. Indeed, speeches delivered at the congress emphasized the necessity of raising children as productive individuals in the fields of commerce, agriculture, and industry (Opening Speech of the İzmir Economic Congress, 1923).

Modernization theories suggest that traditional social structures gradually become rationalized, secularized, and reorganized around institutions based on industrialization. While Lerner (1964) defined modernization as a transition from rural life to urban life and from tradition to secular rationality, Inkeles and Smith (1974) described the modern individual as inquisitive, open to learning, and actively engaged in production. In the Turkish context, this theoretical framework became one of the ideological foundations of educational policies in the early Republican period (Berkes, 1978; Toprak, 2002).

Within this framework, the meaning attributed to education went beyond traditional pedagogical approaches. Education was perceived as a strategic tool for ensuring social integration and accelerating economic development. This transformation was not limited to institutional restructuring; it was directly linked to the goal of raising productive citizens.

One of the clearest reflections of this approach can be observed in the decisions of the İzmir Economic Congress. Vocational and technical education were given special importance, and equipping the population with the knowledge and skills necessary to participate in production processes was regarded as a prerequisite for development (Reports of the Peasants' and Industrial Groups, 1923). The direct association of the concept of a "national economy" with the idea of "national education" indicates that education was positioned not only as a cultural but also as an economic instrument. Mahmut Esat Bozkurt's speeches further emphasized that development could be achieved not only through technical capacity but also through intellectual and moral transformation (Proceedings of the İzmir Economic Congress, 1923).

This perspective also corresponds with the principles articulated in the Economic Pact (Misak-ı İktisadî), which highlighted production, work discipline, science, and education as fundamental elements of social progress (Misak-ı İktisadî, 1923). Thus, the ideas of national economy and national education were addressed together, forming the intellectual basis for the ideological restructuring of the Republican education system.

The İzmir Economic Congress and the Construction of Human Capital in the Early Republic

The educational vision expressed at the İzmir Economic Congress represented not only a pedagogical or cultural transformation but also the construction of human capital at the core of the newly established state's economic development strategy. In the literature on development economics, education is widely recognized as a key determinant of productivity growth and economic expansion (Tilak, 2002; Altınok, 2012). Early reflections of this approach in Turkey became clearly visible during the founding years of the Republic.

An examination of the congress speeches reveals that education was positioned as a direct instrument for increasing economic productivity. Mustafa Kemal emphasized the necessity of raising children as productive individuals in commerce, agriculture, and industry, and argued that educational programs should be aligned with economic development goals (Atatürk, Speeches and Statements, 1923). This perspective can be interpreted as an early expression of what is now described in modern literature as investment in human capital.

One of the major challenges faced by Turkey in the early Republican period was the loss of qualified labor due to wars and the widespread lack of literacy (Berkes, 1978). Consequently, the creation of an educated population capable of participating in production was regarded as a prerequisite for economic development. The emphasis on eliminating illiteracy, improving vocational skills, and expanding public education at the congress clearly reflected this need (Ökçün, 1981).

In this context, early Republican educational reforms can be interpreted not only as initiatives of cultural modernization but also as a systematic human capital investment program. The centralization of education through the Law on the Unification of Education, the mass literacy campaigns of the Nation Schools, and the expansion of vocational education were directly connected to the goal of creating a productive population (Akyüz, 2022).

One of the most concrete institutional reflections of this approach was the Village Institutes. In these institutions, students not only acquired academic knowledge but also gained agricultural, technical, and craft skills, directly participating in production processes (Altunya, 1990; Ergün, 1997). Thus, education became an active component of the production process rather than a passive element of economic development.

In conclusion, the educational vision articulated at the İzmir Economic Congress demonstrates that the early Republican development model was based on a human-centered strategy. The goal of raising productive citizens through education played a central role in achieving both economic independence and social transformation.

The foundations of the modern education system in Turkey were laid during the late Ottoman period and underwent a comprehensive restructuring following the proclamation of the Republic. This transformation should be considered not merely as an institutional reform but as a multilayered modernization movement aimed at reshaping the intellectual, cultural, and socio-economic structure of society. Within this historical continuity, the İzmir Economic Congress of 1923 holds particular significance, as it provided the first systematic platform where the relationship between education and development was articulated in political and economic terms.

The centralization efforts initiated with the Tanzimat Edict of 1839 also extended to the field of education. The Regulation of Public Education (Maarif-i Umumiye Nizamnamesi) of 1869 aimed to establish a graded education system covering all levels from primary to higher education and represented a major step in the institutionalization of modern schooling. The establishment of *rüştiye* (secondary schools), *idadi* (high schools), the *dârülfünun* (university), and teacher training institutions demonstrates how education was increasingly utilized as an instrument of social transformation (Akyüz, 2022).

During the Second Constitutional Period, education expanded to include broader segments of society. Under the influence of intellectuals and civil society, public education initiatives and literacy campaigns gained momentum (Koçer, 1994). The growing belief that education should not remain limited to elites contributed to the emergence of a public discourse that later formed the foundation of the Republican commitment to mass education.

During the War of Independence, education was treated as an integral component of the struggle for national sovereignty. The Congress of Education held in Ankara in 1921 exemplifies this approach. Mustafa Kemal's statement that "our most important and most productive duties are national education affairs" clearly demonstrates the central role attributed to education in the future of the new state (Atatürk, *Speeches and Statements*).

Following the proclamation of the Republic, more radical changes were implemented in education. The Law on the Unification of Education (Tevhid-i Tedrisat) adopted in 1924 brought all educational institutions under a single authority and established the legal foundation for a centralized and secular

education system (Başar, 2004). This reform positioned education both as a tool and as the content of nation-building.

This transformation was driven not only by cultural and political motives but also by economic necessities. Speeches delivered at the İzmir Economic Congress clearly demonstrated the direct relationship between economic development and education. Mustafa Kemal's emphasis on raising children as productive individuals in commerce, agriculture, and industry highlighted the need to align educational programs with development goals (Atatürk, 1923/2006).

In conclusion, the transition from the Ottoman Empire to the Republic in the field of education was characterized not by a complete rupture but by a process in which continuity and change coexisted. The modernization efforts initiated during the Tanzimat period were strengthened by the popular education ideals of the Constitutional era, gained a national character during the War of Independence, and reached institutional coherence with the establishment of the Republic. Within this historical trajectory, the İzmir Economic Congress stands out as an early and powerful expression of a transformative mindset that regarded education as a fundamental component of economic development.

From the Ottoman Empire to the Republic: The Modernization of Education

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The Road to the 1923 İzmir Economic Congress: A Political Strategy and a Foundational Initiative

The decision to convene the 1923 İzmir Economic Congress should be understood as a strategic response to the profound socioeconomic devastation faced by Anatolia after years of war and occupation. With the conclusion of the War of Independence, the country confronted severe economic destruction: productive capacity had weakened, commercial networks had disintegrated, and a planned approach to economic recovery had become imperative. In this context, the Minister of Economy, Mahmut Esat Bozkurt, articulated the necessity of the congress by stating that “economists who had long been neglected should convene to determine the needs of the country” (İzmir İktisat Kongresi Belgeleri, 1923).

On 21 November 1922, Bozkurt proposed the convening of an economic congress in İzmir through a telegram addressed to Mustafa Kemal Pasha, requesting that he assume its honorary presidency (TBMM Zabıt Ceridesi, 1923). Within a short time, the initiative received coverage in the press, and preparations for the congress began to be publicly announced from December 1922 onward. The newspaper *Anadolu Yeni Gün* presented the congress as a critical step toward economic independence (Anadolu Yeni Gün, 27 December 1922).

A total of 1,135 delegates—comprising artisans, farmers, merchants, and industrialists from various regions of Turkey—participated in the congress (Ökçün, 1981). Nevertheless, the representative character of the delegates was subject to criticism both in the press and in parliamentary debates. The fact that the congress convened during the first phase of the Lausanne Conference strengthened interpretations that the initiative carried a diplomatic message directed at the international community. The newspaper *Hakimiyet-i Milliye* described the congress as the “proclamation of the national economy,” emphasizing the economic orientation of the emerging state (Hakimiyet-i Milliye, 1923).

The choice of İzmir as the venue also generated debate. In a speech delivered at the Grand National Assembly of Turkey, Trabzon Deputy Ali Şükrü Bey criticized this decision, arguing that such a comprehensive undertaking would have been more appropriately conducted through a commission (TBMM Zabıt Ceridesi, 1923). These discussions demonstrate that the congress was regarded not merely as an economic consultative meeting but as a foundational initiative that would shape the economic policies of the new state.

Preparations for the congress were swiftly brought onto the parliamentary agenda and became the subject of political debate. On 3 February 1923, Ali Şükrü Bey submitted a parliamentary question requesting clarification regarding the authority and scope of the congress, thereby rendering its political dimension even more visible (TBMM Zabıt Ceridesi, 1923). Considering the political atmosphere of the period, it is inconceivable that such a comprehensive organization could have taken place without the knowledge and approval of Mustafa Kemal Pasha.

The Report of the Executive Committee (Heyet-i Faale Raporu), prepared by the Ministry of Economy, constitutes the first official document outlining the scope of the congress. The report addressed in detail issues such as the development of the credit system, the expansion of production, the regulation of customs policies, the reform of the tax system, and the improvement of transportation infrastructure. *Anadolu Yeni Gün* publicized the report, describing the congress as “the beginning of economic revival” (*Anadolu Yeni Gün*, 6 February 1923).

In a circular sent to the provinces on 5 February 1923, it was officially announced that the congress would convene under the honorary presidency of Mustafa Kemal Pasha and was defined as “the beginning of a new economic era” (*Hakimiyet-i Milliye*, 6 February 1923). The press closely followed the preparations, reporting in detail that the accommodation, transportation, and communication needs of the delegates were being met by the Municipality of İzmir (*Anadolu Yeni Gün*, 16 February 1923).

Taken together, this preparatory process demonstrates that the İzmir Economic Congress was not merely an economic meeting; rather, it was perceived as a nationwide mobilization and a foundational initiative proclaiming the economic orientation of the new state. The congress constituted a significant turning point at which the Republic’s objective of economic independence was publicly articulated and endowed with social legitimacy.

The National Economic Pact (Misak-ı İktisadî) and the Emergence of Educational Themes at the Congress

Proclaimed during the session of 4 March 1923, the *Misak-ı İktisadî* (National Economic Pact) is regarded as one of the foundational texts articulating the economic and social vision of the Republic of Turkey. In its preamble, economic independence was defined as the natural continuation of the National Struggle and emphasized in the following terms:

“The people of Turkey, relying on their national sovereignty, shall also secure their economic independence.” (İzmir İktisat Kongresi, Misak-ı İktisadî, 1923)

This statement clearly reflects the view that political independence must be consolidated through economic independence. The text assigns a central place to production and the ethic of labor, underscoring that the Turkish nation must produce, avoid waste, and remain constantly industrious. Indeed, the declaration states: *“The Turkish nation is industrious; it avoids waste and aims to increase what it produces”* (Misak-ı İktisadî, 1923).

One of the most striking aspects of the document is the strong significance attributed to education. It affirms that “education and enlightenment are the fundamental conditions for the elevation of national existence,” thereby positioning education as a primary instrument of social development. This perspective demonstrates that education and economic development were treated at the congress as inseparable components of national progress.

The *Misak-ı İktisadî* also established a national framework for foreign economic relations. While it did not adopt an outright opposition to foreign capital, it emphasized that such capital must operate within the framework of national law. This approach may be interpreted as an early indication of the mixed economic model that the Republic would adopt in subsequent years.

The most concrete educational proposals discussed at the congress emerged particularly from the peasant group. Recommendations for the provision of practical agricultural training in villages, the establishment of school farms, and the assignment of teachers to rural areas may be regarded as early intellectual foundations that would later contribute to the establishment of the Village Institutes (*İzmir İktisat Kongresi Tutanakları*, 1923). Reports submitted by the commerce, industry, and labor groups likewise supported a production-oriented conception of development. The labor group’s demands for an eight-hour workday and trade union rights stand among the early examples of social policy debates in the period.

The General Framework of the Congress and the Emphasis on Education



The İzmir Economic Congress, convened on 17 February 1923 with the opening address of Mustafa Kemal Atatürk, constituted the first comprehensive meeting aimed at determining the economic orientation of the new Turkish state. Held at the Hamparsomyan Facilities in İzmir, the congress brought together 1,135 delegates from different regions of the country. The contemporary press followed the proceedings closely and characterized the gathering as the “proclamation of the national economy” (*Hakimiyet-i Milliye*, 1923; *Anadolu Yeni Gün*, 1923).

The congress convened while the Lausanne negotiations were still ongoing, thereby signaling that the meeting carried a diplomatic message addressed to the international community. It was perceived as a foundational step intended to complement the military and political achievements of the National Struggle with economic independence.

In his opening speech, Mustafa Kemal Pasha articulated this perspective in the following words:

“No matter how great political and military victories may be, they cannot be enduring unless crowned with economic victories.” (Atatürk, 1923/2006, p. 115)

In the same address, he clearly emphasized the centrality of education to economic development: *“We must raise our children in a manner that renders them productive and effective in the fields of commerce, agriculture, and industry. Our primary and secondary education curricula must be prepared in accordance with this principle.”* (Atatürk, 1923/2006, p. 115)

The Minister of Economy, Mahmut Esat Bozkurt, defined the objective of the congress as identifying the country’s resources and formulating a practicable economic policy, while also underscoring its function in promoting social cohesion (Ökçün, 1981). The President of the Congress, Kazım Karabekir Pasha, described ignorance as one of the principal obstacles to national development.

Although no separate education commission was established, educational recommendations appeared in the reports of all delegate groups. The Peasants’ Group report identified the dissemination of education as a prerequisite for public order and proposed the organization of “Tree Festivals” in schools to cultivate environmental awareness (Ökçün, 1971). The Industry and Labor groups emphasized the importance of vocational training and the encouragement of women’s participation in economic life (Ökçün, 1981).

In sum, the İzmir Economic Congress articulated a holistic vision that treated education and economic development as inseparable components. Education was conceived not merely as a means of individual advancement but as the principal instrument for cultivating productive citizens, fostering national unity, and securing economic independence.

The Reflection of the Congress Decisions on Republican Educational Reforms

The 1923 İzmir Economic Congress was not solely a forum for determining economic principles; it also provided a powerful intellectual framework that shaped the direction of the Republic's educational policies. Although no distinct education commission was formed, the idea of cultivating production-oriented citizens constituted the ideological foundation of early Republican reforms. Education was associated with multidimensional objectives, including the eradication of ignorance, the strengthening of social integration, and the acceleration of economic development.

One of the primary aims of early Republican educational policy was the elimination of illiteracy and the integration of society into productive processes. This orientation was institutionalized with the 1924 Law on the Unification of Education (*Tevhid-i Tedrisat Kanunu*), which centralized the educational system and endowed it with a national structure (Akyüz, 2022). Education thus became a fundamental instrument in shaping the citizen envisioned by the new Republic.

The direct linkage established in the Peasants' Group reports between education and public order is particularly noteworthy. The expansion of education was presented as essential for social security and stability. This approach formed the intellectual background of the mass literacy campaigns of the early Republican period. The 1928 Alphabet Reform and the establishment of the Nation Schools (*Millet Mektepleri*) emerged as concrete implementations of this vision (Başar, 2004).

The emphasis placed on vocational and technical education at the congress was likewise reflected in Republican educational policy. The development of practical institutions that would integrate the young population into productive processes became a central objective. The Art Institutes and Vocational Schools established in the 1930s represented the institutional embodiment of this approach (Akyüz, 2022).

Discussions concerning rural development proved particularly influential in shaping educational policy. Proposals advocating practical agricultural

education in villages materialized in the Village Institutes (*Köy Enstitüleri*), founded in 1940. In these institutions, students acquired not only academic knowledge but also production-based skills, thereby becoming active agents of economic development (Altunya, 1990).

Debates regarding women's participation in economic life were also reflected in educational reforms. The Girls' Institutes and Girls' Technical Schools established in the 1930s and 1940s supported women's integration into productive processes and formed part of the Republic's broader social transformation agenda (Başar, 2004). Education thus became an instrument of gender transformation as well.

Even environmental awareness proposals discussed at the congress found resonance in educational policy. Recommendations to cultivate a love of trees in schools constituted early examples of environmental consciousness within Republican curricula (Ökçün, 1971).

The establishment of the People's Houses (*Halkevleri*) in 1932 represented the institutionalization of the idea that education should not be confined solely to formal schooling. Through these institutions, civic consciousness, historical awareness, and national identity were disseminated among broad segments of society (Üstel, 2004).

Chronologically assessed, the influence of the İzmir Economic Congress on educational policy can be clearly traced:

Unification of Education (1924) → Nation Schools (1928) → People's Houses (1932) → Village Institutes (1940).

This trajectory demonstrates that Republican educational reforms were not incidental developments but rather constituted the institutional continuation of the developmentalist educational vision articulated at the congress.

The conception of "education for development" expressed at the congress extended beyond institutional reform. Education was positioned at the center of the new state's processes of social integration, economic modernization, and nation-building. In this framework, the teacher was conceived not merely as a transmitter of knowledge but as a pioneer of social transformation (İncebacak, 2019).

The 1924 report on Turkey by John Dewey, with its emphasis on vocational and practical education, further supported this process (Dewey, 1939). Nevertheless, many scholars emphasize that the Village Institutes were not

merely the product of external influence but rather the continuation of the populist developmental vision articulated at the 1923 İzmir Economic Congress (Koçer, 1994; Ergün, 1997).

In conclusion, the educational conception articulated at the İzmir Economic Congress evolved into a concrete process of transformation through the founding reforms of the Republic. Education became one of the central pillars of Republican modernization and assumed a decisive role in cultivating the citizens who would realize economic development.

A Comparative Perspective on the İzmir Economic Congress

The relationship between education and development articulated at the 1923 İzmir Economic Congress should not be interpreted solely as a uniquely Turkish modernization experience. Rather, it must be situated within the broader context of state-led development models that emerged across various countries during the first half of the twentieth century. This period corresponds to a global historical conjuncture in which nation-states addressed economic independence, industrialization, and social transformation in conjunction with educational reform (Green, 1997; Hobsbawm, 1995). From this perspective, Turkey's experience acquires broader historical significance when compared with the Soviet Union, Meiji-era Japan, and Latin American developmentalism.

Parallels with Soviet Modernization

Following the 1917 Bolshevik Revolution, education in the Soviet Union was regarded as a principal instrument of rapid industrialization and economic development. Literacy campaigns and technical training programs implemented during the 1920s aimed to create a qualified labor force capable of participating in production (Fitzpatrick, 1999). The objectives articulated at the 1923 İzmir Economic Congress—namely the eradication of ignorance, the expansion of vocational education, and the cultivation of productive citizens—display striking parallels with the human capital-oriented development approach of Soviet modernization.

Nevertheless, the Turkish model diverged significantly from the Soviet system. Turkey did not reject private enterprise; rather, it adopted a mixed economic framework. This indicates that educational policies were shaped not by an ideological revolution but by pragmatic developmental objectives (Berkes, 1978). In this respect, the Turkish model reflects a distinctive development strategy that combined state guidance with market mechanisms.

Parallels with Meiji Japan

The reforms undertaken in Japan during the Meiji era constitute one of the earliest and most successful examples of the linkage between education and economic development. In order to construct a modern industrial society, the Meiji administration rapidly expanded compulsory education and placed particular emphasis on technical training (Gordon, 2003).

Strong parallels can be identified between the production-oriented conception of education articulated at the İzmir Economic Congress and the modernization strategy of Meiji Japan. In both cases, education was perceived as a fundamental component of national independence and economic competitiveness (Green, 1997). This similarity illustrates that in late-modernizing countries, education was commonly positioned as an instrument of national development.

Comparison with Latin American Developmentalism

Developmentalist policies that emerged in Latin America during the mid-twentieth century also treated education as an important component of economic growth. However, in many Latin American countries, educational reforms were implemented largely after the onset of industrialization and often failed to generate the anticipated economic transformation (Bulmer-Thomas, 2003).

In the Turkish case, by contrast, education was placed at the center of the development strategy before the process of industrialization had fully commenced. This demonstrates that Republican educational policy was grounded in a proactive and long-term developmental vision. Education was conceived not as a byproduct of development but as its precondition.

In comparative perspective, therefore, the educational vision articulated at the İzmir Economic Congress appears aligned with broader global modernization trends of the period, while simultaneously reflecting a development model adapted to Turkey's own social conditions.

Conclusion

This study demonstrates that the 1923 İzmir Economic Congress played a foundational role not only in shaping economic policy but also in defining the educational vision of the Republic. The findings indicate that the production-oriented conception of citizenship articulated at the congress provided a strong intellectual and ideological foundation for subsequent Republican

educational reforms. In this respect, the congress offered a holistic development perspective that addressed both the economic and educational dimensions of early Republican modernization.

While the existing literature has largely examined the İzmir Economic Congress within the framework of economic policy, its relationship with educational reform has received comparatively limited attention. By analyzing the congress proceedings, the debates of the Grand National Assembly, and contemporary press coverage together, this study makes visible the historical continuity between the congress decisions and Republican educational reforms. It thus reveals the indirect yet substantial influence of the congress on educational policy.

The research findings indicate that three principal educational themes articulated at the congress found institutional expression in Republican reforms:

- **Eradication of ignorance** → Nation Schools (*Millet Mektepleri*)
- **Production-based education** → Vocational schools and Village Institutes
- **Public education** → People's Houses (*Halkevleri*) and non-formal education policies

This continuity suggests that Republican educational reforms were not solely the result of external influences but represented the continuation of a domestically articulated development vision first expressed at the İzmir Economic Congress. This conclusion complements Westernization-centered interpretations of early Republican education policy.

An important contribution of this study lies in demonstrating that early Republican educational reforms can be evaluated as part of a human capital-based development strategy. Education was reorganized to enhance economic productivity, and the formation of a productive population became central to policy design.

The research further indicates that the influence of John Dewey was not singularly determinative. Rather, a distinctive educational model emerged from the synthesis of indigenous intellectual currents and external pedagogical influences. Republican educational reforms thus reflected the convergence of national and international dynamics.

Contemporary debates concerning the relationship between education and economic development, the strengthening of vocational education, and lifelong learning underscore the continued relevance of the vision articulated at the İzmir Economic Congress. For this reason, the congress should be regarded

not merely as a historical event but also as a significant reference point for present-day educational policy.

In conclusion, the İzmir Economic Congress represented not only a program for economic development but also the point of departure for a comprehensive modernization project aimed at social transformation through education. In this respect, it occupies a foundational place in the formation of the Republic's educational ideology.

This study has focused on the discursive and historical impact of the congress decisions. Future research employing quantitative methods to examine the regional effects and long-term socioeconomic outcomes of Republican educational reforms would make a valuable contribution to the literature.

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CHAPTER 5

Synergy Between Mathematics and Artificial Intelligence: Theoretical Foundations, Algorithmic Approaches, and Future Perspectives

Tuğba Diker¹

Abstract

The relationship between mathematics and artificial intelligence (AI) plays a decisive role in the development of modern science and technology. While mathematical models, algorithms, and optimization techniques constitute the foundation of AI systems, AI simultaneously provides new tools that accelerate mathematical discovery. This study examines the synergistic interaction between mathematics and artificial intelligence within the framework of theoretical foundations, algorithmic approaches, and future perspectives. The effects of linear algebra, probability theory, statistics, optimization, and computational theory on AI are analyzed; the mathematical foundations of machine learning, deep learning, and symbolic artificial intelligence are examined. Furthermore, the contributions of AI to mathematical problem solving, theorem proving, and modeling processes are discussed. In the final section, the future potential of AI-assisted mathematical discovery and interdisciplinary research directions are evaluated.

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1. Introduction

Artificial intelligence, one of the most significant technological developments of the information age, is built upon mathematical theories and computational methods. Mathematics serves as a fundamental tool in the design, analysis, and performance evaluation of AI systems. In particular, the widespread adoption of data-driven approaches has increased the importance of mathematical modeling and statistical inference methods.

The relationship between mathematics and artificial intelligence is bidirectional. On the one hand, mathematical methods enable the development of AI algorithms; on the other hand, AI techniques accelerate mathematical discovery and problem-solving processes. This mutual interaction has led to an increase in interdisciplinary research and the emergence of new scientific paradigms.

The aim of this study is to provide a comprehensive analysis of the synergistic relationship between mathematics and artificial intelligence and to reveal the impact of this interaction on scientific research and technological innovation.

2. Historical Development of the Relationship Between Mathematics and Artificial Intelligence

The interaction between mathematics and artificial intelligence gained momentum with the emergence of computer science. Early AI research focused on logic-based systems and symbolic computation methods. During this period, mathematical logic and set theory were used as fundamental tools for knowledge representation.

In the 1970s and 1980s, the development of probabilistic methods and statistical modeling initiated a new era in AI research. Bayesian approaches, decision theory, and stochastic processes became prominent. Since the 2000s, increases in big data availability and computational power have led to the widespread adoption of machine learning and deep learning methods.

Today, AI research is strongly connected with mathematical optimization, differential equations, and topological data analysis. These developments demonstrate that the relationship between mathematics and artificial intelligence has become increasingly complex and productive.

3. Mathematical Foundations of Artificial Intelligence

3.1 Linear Algebra

Linear algebra is one of the most fundamental mathematical disciplines forming the theoretical and practical infrastructure of AI systems. In machine learning and deep learning models, data representation, transformation, and optimization processes largely rely on linear algebraic concepts. Vector spaces, matrices, linear transformations, eigenvalue and eigenvector analysis play a central role in processing high-dimensional data structures.

In AI applications, data are typically represented as multidimensional vectors. For example, an image can be modeled as a high-dimensional vector composed of pixel values, while textual data are represented in numerical vector spaces through word embedding techniques. These representations allow the geometric and algebraic properties of data points to be analyzed. Distance, angle, and similarity measures between vectors are decisive in tasks such as classification, clustering, and pattern recognition.

Matrix operations form the computational foundation of neural networks. In an artificial neural network, each layer multiplies the input by weight matrices and applies a nonlinear activation function. This process can be viewed as a sequence of linear transformations. Operations such as matrix multiplication, inversion, and decomposition require high computational power; therefore, modern AI systems utilize parallel processing architectures such as GPUs.

Eigenvalues and eigenvectors are particularly important in dimensionality reduction and data analysis techniques. For example, Principal Component Analysis (PCA) uses eigenvalue decomposition to identify directions that explain the largest variance in the dataset. This approach reduces computational cost while improving model performance.

Linear algebra also plays an indirect but crucial role in optimization processes. Algorithms such as gradient descent rely on multidimensional vector and matrix operations. Thus, linear algebra is indispensable not only for data representation but also for the mathematical formulation of learning processes.

3.2 Probability Theory and Statistics

AI systems often operate with incomplete, noisy, or uncertain data. Therefore, probability theory and statistics provide a fundamental framework

for decision-making, prediction, and learning processes. Probability theory enables the quantitative modeling of uncertain events, while statistics offers tools for extracting meaningful conclusions from data and evaluating their reliability.

Many machine learning algorithms are based on probabilistic principles. In classification problems, for instance, the probability that an observation belongs to a particular class is computed, and the class with the highest probability is selected. Concepts such as conditional probability, joint distributions, and independence assumptions play central roles. Bayes' theorem enables prior beliefs to be updated in light of new evidence, allowing for adaptive and dynamic models.

Statistical inference methods enable generalizations from sample data to broader populations. Parameter estimation, hypothesis testing, and confidence intervals are widely used in evaluating model performance. Training–test splits, cross-validation techniques, and error metrics such as mean squared error or accuracy are fundamental components of statistical evaluation. These methods help detect overfitting and underfitting.

Probabilistic graphical models effectively represent complex dependencies. Bayesian networks model conditional dependencies among variables through directed graphs. Markov models assume that future states depend only on the current state. Hidden Markov Models (HMMs) are widely used in speech recognition, natural language processing, and time-series analysis.

Probability distributions such as normal, Bernoulli, and Poisson distributions are frequently used in AI model formulation. Maximum likelihood and maximum a posteriori (MAP) estimation methods play central roles in parameter estimation. Even in deep learning systems, loss function design and optimization rely on statistical principles.

3.3 Optimization Theory

Optimization theory lies at the core of machine learning and AI model training. Training is generally formulated as minimizing a loss function that measures the discrepancy between predicted and actual outputs. Thus, learning becomes a search problem in a high-dimensional parameter space.

Gradient descent is one of the most widely used optimization methods. It updates parameters iteratively in the direction of the negative gradient of the loss function. Variants such as stochastic gradient descent (SGD), mini-batch methods, Momentum, RMSProp, and Adam improve convergence speed and stability.

In deep learning, backpropagation applies the chain rule to compute gradients efficiently across layers. Concepts such as local minima, global minima, saddle points, and regularization are critical in understanding optimization dynamics.

3.4 Computation Theory and Complexity

The effectiveness of AI algorithms depends not only on accuracy but also on computational efficiency. Computational complexity theory systematically analyzes time and memory requirements.

Asymptotic notation (e.g., Big-O) describes algorithmic scalability. AI model selection often depends on training and inference time. Model complexity (number of parameters) must be balanced with computational feasibility.

Heuristic and approximate algorithms are often used for combinatorial optimization problems with exponential complexity. Parallel and distributed computing architectures such as GPUs improve scalability. Energy consumption and hardware requirements are emerging considerations in evaluating modern AI systems.

4. Mathematical Algorithmic Approaches in Artificial Intelligence

AI systems rely fundamentally on mathematically defined algorithms. Linear algebra determines data structure; probability quantifies uncertainty; optimization governs learning; complexity analysis ensures feasibility. Graph theory and combinatorics are essential in network-based systems such as recommendation engines and knowledge graphs.

4.1 Machine Learning

Machine learning is one of the most significant subfields of artificial intelligence and refers to the collection of mathematical and statistical methods that enable computer systems to learn from data without being explicitly programmed. Its primary objective is to develop models capable of discovering patterns and relationships within data to make predictions or informed decisions about the future. In this process, disciplines such as mathematical optimization, probability theory, linear algebra, and statistical inference play a central role.

Machine learning algorithms are generally examined under three main categories: supervised learning, unsupervised learning, and reinforcement learning. In supervised learning, the model is trained on a labeled dataset consisting of input and output data. The goal is to learn the functional

relationship between input variables and the target variable. Regression and classification problems are the most common applications of this approach. For example, the linear regression model mathematically represents relationships between variables through minimized error functions, while logistic regression provides a probabilistic approach.

Unsupervised learning, on the other hand, operates on unlabeled data and aims to reveal the inherent structure of the data. Clustering algorithms and dimensionality reduction techniques fall into this category. The k-means algorithm groups data points according to similarity measures, while principal component analysis represents high-dimensional data in a lower-dimensional space, making the data structure easier to interpret. These methods are based on mathematical operations such as distance metrics, eigenvalue decomposition, and variance calculations.

Reinforcement learning is based on the interaction between an agent and its environment, where learning occurs through a reward mechanism. This approach utilizes mathematical concepts such as Markov decision processes, probability transition matrices, and value functions. The goal is to develop a strategy that maximizes long-term rewards. This method is widely used in robotics, game theory, and autonomous control systems.

Optimization techniques used to improve model performance also hold an important place in machine learning. Gradient descent and derivative-based optimization methods aim to find the minimum value of the error function. In this process, learning rate, regularization parameters, and loss functions directly affect model performance. Additionally, cross-validation and regularization techniques are applied to prevent the problem of overfitting.

Today, machine learning forms the foundation of decision support systems in many fields such as healthcare, finance, education, engineering, and social sciences. With the development of big data technologies, it has become possible to train more complex models, leading to the emergence of subfields such as deep learning. This has further increased the importance of mathematical modeling and algorithmic design.

Machine learning is a dynamic research field where mathematical theories and computational power converge. The accuracy and reliability of developed algorithms depend on the robustness of the mathematical methods used. Therefore, establishing a strong balance between theoretical foundations and practical applications is of great importance in machine learning studies.

4.2 Deep Learning

Deep learning, as a subfield of machine learning, is an approach that aims to learn meaningful representations from large and complex datasets through multi-layered structures. Based on artificial neural networks inspired by the neural structure of the human brain, this method demonstrates strong performance especially in the analysis of high-dimensional data. The main objective of deep learning is to automatically extract features from raw data and model complex patterns and relationships.

The fundamental building blocks of deep learning models are artificial neural networks. These networks consist of an input layer, one or more hidden layers, and an output layer. Neurons in each layer process data through weights and activation functions. Mathematically, this process can be expressed as a combination of linear transformations and nonlinear functions. Activation functions provide nonlinearity to the model, enabling it to learn complex relationships.

Optimization algorithms play a critical role in the success of deep learning. In particular, the backpropagation algorithm and gradient-based optimization methods aim to minimize the error function by updating the network weights. In this process, derivative calculations, the chain rule, and matrix operations are extensively used. Parameters such as learning rate, number of layers, and network architecture are important factors that directly affect model performance.

Deep learning architectures vary depending on the application area. Convolutional neural networks stand out particularly in image processing and computer vision, while recurrent neural networks are widely used in time series data and natural language processing problems. Attention mechanisms and transformer-based models developed in recent years have enabled more effective learning on large-scale data, leading to significant advances in artificial intelligence applications.

Training deep learning models generally requires large amounts of data and high computational power. The development of graphics processing units and parallel computing techniques has made it possible to train deeper and more complex models. However, issues such as overfitting, model complexity, and interpretability remain important research topics in the field. Regularization techniques, early stopping, and data augmentation methods help reduce these problems.

Today, deep learning is used in many fields such as image and speech recognition, natural language processing, autonomous vehicles, medical

diagnosis, and recommendation systems. These methods play an important role in the advancement of artificial intelligence applications by providing higher accuracy compared to traditional algorithms. With the growth of big data, the performance of deep learning models continues to improve and new application areas are emerging.

Deep learning holds a central position in artificial intelligence research as a powerful approach that combines mathematical modeling with high computational capacity. Thanks to the representational power offered by multi-layered structures, effective results can be achieved in solving complex problems. Developing more efficient algorithms and improving model interpretability will continue to be important research directions in this field.

4.3 Symbolic Artificial Intelligence

Symbolic artificial intelligence is an approach that aims to model reasoning and problem-solving processes by representing knowledge through symbols and rules. This paradigm focuses on expressing the logical structure of human thought processes in a computational environment and provides effective solutions especially for problems requiring explicit knowledge representation. Symbolic approaches have been developed since the early periods of artificial intelligence and lie at the intersection of logic, mathematics, and cognitive science.

Knowledge representation forms the foundation of symbolic artificial intelligence. In this approach, knowledge is structured through symbols, rules, ontologies, and logical expressions. Expressing knowledge in such an explicit and systematic way enables systems to make decisions that are understandable and explainable. Rule-based structures used particularly in expert systems make it possible to solve problems by modeling domain knowledge through “if-then” logic.

Logical inference mechanisms are among the most important components of symbolic artificial intelligence. New conclusions are derived from existing knowledge using formal systems such as propositional logic and first-order logic. Reasoning processes involve deductive, inductive, and analogical reasoning methods. These processes are carried out through mathematical logic rules and algorithmic inference techniques.

Search algorithms also play a significant role in symbolic artificial intelligence systems. The problem-solving process generally relies on finding the most appropriate solution path within a state space. In this context, breadth-first search, depth-first search, and heuristic search methods are commonly

used. Heuristic functions enable more efficient searches by incorporating additional information about the problem to accelerate the solution process.

The knowledge base and inference engine constitute the core components of symbolic systems. The knowledge base contains all the rules and facts possessed by the system, while the inference engine performs logical operations on this information to generate new knowledge. Through this structure, systems can perform logical reasoning on complex problems and provide explainable results.

One of the most important advantages of symbolic artificial intelligence is explainability. The decision-making processes of systems can be traced and analyzed through explicit rules. This feature is particularly important in fields requiring reliability, such as law, medicine, and decision support systems. However, symbolic approaches may be limited when dealing with uncertain and large-scale data and can be less flexible than data-driven methods in learning processes.

Today, symbolic artificial intelligence is gaining renewed importance within hybrid systems together with machine learning and deep learning methods. These hybrid approaches enable the development of more powerful and flexible AI systems by combining data-driven learning with logical reasoning. Symbolic methods play an important role especially in explainable artificial intelligence studies.

Symbolic artificial intelligence continues to be one of the fundamental approaches in AI research thanks to its logic-based knowledge representation and reasoning capabilities. Its strengths, such as explainability and transparency, make this approach indispensable particularly in critical decision-making processes. In the future, the integration of symbolic methods with data-driven techniques will remain an important research area for developing more reliable and interpretable artificial intelligence systems.

5. Contributions of Artificial Intelligence to Mathematical Problem Solving

AI has evolved into a powerful research tool that directly contributes to mathematical problem-solving. It accelerates large-scale computation, pattern discovery, hypothesis generation, combinatorial search, and automated theorem proving. Rather than replacing human intuition, AI enhances and extends it.

6. Interdisciplinary Applications

The synergy between mathematics and AI finds applications in engineering, healthcare, finance, education, energy systems, and scientific research. This interaction accelerates innovation and interdisciplinary collaboration.

7. AI-Assisted Mathematical Discoveries

AI contributes to:

- Theorem proving
- Hypothesis generation
- Mathematical pattern discovery
- Model optimization
- Simulation of complex systems

Hybrid approaches combining deep learning and symbolic AI represent significant advancements in mathematical creativity.

8. Mathematical Modeling and Artificial Intelligence

AI enhances mathematical modeling by enabling adaptive, data-driven models. Neural networks are increasingly used in solving differential equations, particularly in physics-informed neural networks. AI extends the analysis of nonlinear and multivariable systems.

9. Application Areas of Mathematics–AI Synergy

Applications include healthcare analytics, financial modeling, engineering optimization, educational analytics, energy systems, environmental modeling, and scientific discovery.

10. Ethical, Reliability, and Methodological Discussions

Key issues include algorithmic transparency, data bias, interpretability limitations, validation of AI-generated mathematical results, and reliability in critical systems.

11. Future Perspectives

Future developments may include:

- AI-supported mathematical creativity
- Quantum artificial intelligence
- Autonomous scientific systems
- Explainable AI frameworks

12. Open Research Problems

Open challenges include:

- The generalization problem
- Mathematical theory of deep learning
- Limits of automated theorem proving
- Verification and reliability in AI
- Computational complexity and scalability

13. Discussion

The relationship between mathematics and artificial intelligence represents not only a technical interaction but also an epistemological transformation. AI accelerates knowledge production, while mathematics defines theoretical boundaries.

14. Conclusion

This study comprehensively examined the synergistic relationship between mathematics and artificial intelligence within theoretical, algorithmic, and future-oriented perspectives. Mathematics forms the backbone of AI systems, while AI transforms mathematical discovery, modeling, and problem-solving processes. Their mutual interaction stands as one of the strongest driving forces of scientific progress.

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CHAPTER 6

The Impact of Professional Educational Leadership on Teacher Civility Culture

Yasin Demirci¹

Abstract

This book chapter examines how professional educational leadership shapes the normative structure of schools and how this process influences the development of teacher civility culture. Departing from the assumption that schools are not merely technical or bureaucratic organizations but normatively dense social institutions, the chapter argues that school effectiveness cannot be fully understood through academic performance indicators alone. Rather, it must also be analyzed through the quality of internal relational dynamics and the institutionalization of respect-based norms.

The chapter integrates insights from the sociology of professions (Freidson), social learning theory (Bandura), ethical leadership and organizational justice literature, and the theory of psychological safety (Edmondson) to construct a multi-layered conceptual framework. Professional educational leadership is conceptualized not simply as managerial competence but as a norm-generating capacity embedded in expertise, ethical responsibility, and institutional accountability. Within this framework, professional educational leadership is operationalized across four structural dimensions: strategic leadership, ethical governance, participatory decision-making, and professional development

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support. These dimensions are theorized to influence teacher civility culture both directly and indirectly through school climate and psychological safety as mediating mechanisms.

Teacher civility culture is conceptualized from a positive normative perspective rather than as the mere absence of workplace incivility. It is defined as an institutionalized relational order characterized by professional respect, constructive communication, fair conflict resolution, collegial solidarity, and psychological and organizational trust. The chapter advances the argument that civility culture constitutes a core component of a school's social capital and collective efficacy, functioning as a foundational condition for pedagogical innovation and organizational learning. In this sense, civility is positioned not as individual politeness but as a collectively sustained normative infrastructure.

To contextualize the theoretical model, the chapter offers a comparative analysis of Finland, Singapore, and Türkiye. In Finland, high-trust systems and professional autonomy contribute to the institutionalization of civility norms within a strong professional ethics framework. In Singapore, selective leadership preparation programs systematically cultivate normative alignment and professional standards across the system. In Türkiye, where educational governance operates within a more centralized structure, normative capacity is shaped significantly by school-level leadership practices, particularly through ethical governance and participatory mechanisms. This comparative perspective reinforces the argument that professionalization is not merely a regulatory arrangement but a cultural and normative production process.

The proposed conceptual model suggests that professional educational leadership enhances school climate and psychological safety, which in turn foster teacher civility culture. The model is designed to be empirically testable through structural equation modeling (SEM), thereby providing a foundation for future quantitative validation of the theoretical framework.

In conclusion, the chapter posits that teacher civility culture represents the behavioral manifestation of a school's normative capacity, social capital, and learning potential. Professional educational leadership generates ethical and relational norms, strengthens psychological safety, and institutionalizes respect-based practices. Through these mechanisms, civility culture becomes a sustainable organizational value system rather than an individual-level behavioral trait. The chapter thus contributes to the literature by positioning civility as a strategic leadership outcome and a critical dimension of professionalized school governance.

Keywords: Professional Educational Leadership; Teacher Civility Culture; Psychological Safety; School Climate; Ethical Governance; Organizational Justice.

1. Introduction

Contemporary approaches to understanding the functioning of educational organizations increasingly conceptualize schools not merely as structures where administrative and pedagogical processes are carried out, but also as social arenas in which norms are produced and reproduced. This perspective goes beyond the visible structural elements of schools and requires the analysis of the values, expectations, and norms of mutual respect that guide behavior within the organization. Considering the impact of interaction patterns among teachers on school climate and learning capacity, explaining the normative structure of schools constitutes the theoretical foundation of this study. Therefore, the following section examines the normative structure of the school in detail within a conceptual and theoretical framework.

The Normative Structure of Schools and the Problem Framework

Educational organizations have long been analyzed within the framework of classical bureaucratic management models, and school leadership has typically been defined primarily through administrative coordination and the implementation of regulations. However, contemporary organizational theory and the educational leadership literature increasingly conceptualize schools not merely as technical-rational structures but as social systems characterized by a high degree of normative density. Foundational studies in institutional theory—particularly Meyer and Rowan’s (1977) approach to organizational legitimacy—demonstrate that the functioning of educational institutions cannot be explained solely through technical efficiency. Rather, it is shaped by normative expectations, cultural symbols, and value systems. In this sense, the school can be understood both as a site of pedagogical production and as an institutional space in which social norms are reproduced.

The normative density of schools constitutes one of the fundamental characteristics that distinguishes them from many other organizations. Hoy and Miskel (2013) describe school organizations as “normatively saturated institutions,” emphasizing that teacher behavior is guided not only by formal job descriptions but also by professional ethics and cultural expectations. Because educational organizations aim not only at the cognitive development of individuals but also at their social and moral development, relational quality

and norms of respect occupy a central position. Consequently, patterns of interpersonal interaction within schools represent indirect yet powerful determinants of pedagogical outcomes.

Since the 1990s, a paradigm shift in organizational behavior literature has demonstrated that micro-level interactions may produce macro-level organizational consequences. The concept of workplace incivility developed by Andersson and Pearson (1999) revealed that low-intensity violations of respect, often characterized by ambiguous intent, may generate reciprocal cycles within organizations, leading to conflict escalation and decreased performance. This “spiral model” suggests that seemingly minor acts of disrespect may gradually weaken institutional trust and negatively affect the organizational climate. Porath and Pearson (2013) found that incivility leads to significant declines in productivity and creativity, while Leiter, Laschinger, Day, and Oore (2011) demonstrated that incivility is associated with burnout and reduced job satisfaction. These findings indicate that norms of respect are not only ethical considerations but also strategic variables in terms of organizational performance and sustainability.

Within the school context, the importance of respect and trust becomes even more pronounced. Goddard, Hoy, and Woolfolk Hoy (2000), who examined the relationship between teacher trust and collective efficacy, found that collective teacher efficacy is strongly associated with student achievement. Similarly, Cohen, McCabe, Michelli, and Pickeral (2009) conceptualized school climate through dimensions such as safety, relationships, and institutional environment, emphasizing that relational quality plays a decisive role in overall school performance. This body of literature clearly demonstrates that the normative structure of schools is directly connected to the quality of teaching and learning processes.

At this point, the central problem becomes evident: **Do norms of respect and civility emerge spontaneously within schools, or are they institutionalized through leadership and governance practices?**

The literature on professionalization provides a strong theoretical foundation for addressing this question. Freidson (2001) argues that professional logic possesses the capacity to generate norms based on specialized knowledge. Professional leadership does not merely implement rules; it produces and institutionalizes ethical standards and behavioral norms. As educational management becomes professionalized, school leadership transforms from a bureaucratic position into an actor that actively constructs organizational culture.

In this transformation process, the norm-generating role of leadership can also be explained through social learning theory. According to Bandura (1977), individuals learn behavioral patterns by observing and modeling others. The ethical leadership model developed by Brown, Treviño, and Harrison (2005) demonstrates that leaders shape organizational behavior standards by functioning as normative role models. Fair, transparent, and participatory practices implemented by school administrators may therefore contribute to the institutionalization of respect norms among teachers.

Another fundamental dimension of the normative structure is **psychological safety**. Edmondson (1999) defines psychological safety as the absence of fear of punishment when individuals make mistakes or express differing opinions within a team. In organizations characterized by high psychological safety, learning behavior and innovation tend to increase. Tschannen-Moran (2014) further demonstrates that trust within school contexts plays a decisive role in teacher job satisfaction and organizational commitment. These findings suggest that a strong relationship exists between norms of respect and psychological safety.

Accordingly, the problem framework can be formulated as follows:

1. Schools are institutions characterized by high normative density.
2. Micro-level violations of respect may influence organizational climate and performance.
3. The institutionalization of respect and civility norms may be related to the level of leadership and professionalization.
4. Psychological safety may function as a mediating mechanism within this relationship.

This section positions **professional educational leadership as a norm-generating leadership capacity**, conceptualizes **school climate and psychological safety as mediating mechanisms**, and analyzes **teacher civility culture as an institutionalized form of social order within schools**. In this way, civility culture is conceptualized not merely as individual politeness but as a sustainable organizational value system constructed through professional leadership.

2. Theoretical Framework I: Professionalization and Educational Management

2.1. The Sociological Foundations of Professionalization

The concept of professionalization refers to the definition of occupations in modern societies through their authority of knowledge, autonomy, and capacity to generate norms. Classical approaches in the sociology of professions (Carr-Saunders & Wilson, 1933; Parsons, 1954) argued that professional groups attain a privileged position through specialized expertise and social responsibility. However, more critical and structural perspectives have conceptualized professionalization not merely as technical expertise but also as a capacity for normative regulation.

Freidson (2001) argues that there are three fundamental regulatory logics in modern society: the logic of the market (competition and price), the bureaucratic logic (hierarchy and rules), and the professional logic (expertise-based norm production). Professional logic is grounded in knowledge authority and possesses the capacity to establish its own ethical standards. In this sense, professionalization refers to the institutionalization of behavioral norms and ethical frameworks within organizations.

When educational management is evaluated from this perspective, school leadership cannot be understood merely as an administrative coordination role; rather, it represents a professional field that requires pedagogical, ethical, and cultural leadership. Hoy and Miskel (2013) distinguish school leadership from technical management by emphasizing its normative and cultural dimensions. Accordingly, the professionalization of educational management constitutes a process that directly influences the normative structure of schools.

2.2. From the Bureaucratic Model to Professional Leadership

When the historical development of educational management is examined, it becomes evident that it was shaped for a long time under the influence of the Weberian model of bureaucracy. Weber's (1978) concept of rational-legal authority is based on a rule-based and hierarchical administrative structure. Although this model provides stability and predictability, it may limit the capacity for normative production within organizations.

Since the 1980s, the transformation in leadership literature has shifted the managerial role toward a more normative and cultural framework. The transformational leadership approach developed by Burns (1978) and Bass

(1985) argues that leadership is not merely a matter of management, but also a process of generating values and constructing vision. Transformational leaders shape organizational culture by transforming the values and motivational levels of their followers. In educational organizations, this approach may strengthen norms of collaboration and professional respect among teachers.

At the same time, the instructional leadership approach (Hallinger, 2005) emphasizes that leadership should focus directly on instructional quality and academic processes. Instructional leaders clarify pedagogical goals, establish feedback mechanisms, and support teacher development. By placing teacher expertise at the center, this approach can strengthen perceptions of professional status.

Furthermore, the distributed leadership approach developed by Spillane (2006) argues that leadership does not belong to a single actor but rather constitutes a practice shared within the organization. Harris (2008) demonstrates that distributed leadership strengthens cultures of trust and collaboration. Participatory leadership practices represent the democratic dimension of professionalization and transform norm production into a collective process.

2.3. Core Dimensions of Professional Educational Leadership

Professional educational leadership is not limited to the effective execution of administrative duties; rather, it represents a multidimensional form of leadership that encompasses expertise-based decision making, the production of ethical norms, and the capacity to construct institutional culture. When the sociology of professions (Freidson, 2001) and the educational leadership literature (Leithwood et al., 2008; Hoy & Miskel, 2013) are considered together, it becomes evident that professional educational leadership concentrates on four fundamental dimensions in terms of generating normative capacity: **strategic leadership, ethical governance, participatory decision-making, and professional development support**. These dimensions do not function independently; instead, they operate as interrelated mechanisms that shape the normative structure of schools through an integrated and interactive framework.

2.3.1 Strategic Leadership

Strategic leadership refers to the capacity to determine the long-term direction of an organization, adapt to environmental changes, and align resources with organizational priorities (Yukl, 2013). In the educational context, strategic leadership involves clearly defining the school's mission

and vision, aligning performance goals with pedagogical values, and reducing organizational uncertainty.

Leithwood, Harris, and Hopkins (2008), in their analysis of the indirect effects of school leadership on student achievement, demonstrate that the capacity to establish strategic direction plays a decisive role in shaping teacher motivation and school climate. Clear goals and consistent orientations reduce role ambiguity and lower the risk of internal organizational conflict. The literature on role ambiguity (Rizzo, House, & Lirtzman, 1970) indicates that unclear roles are associated with stress and interpersonal tension. Therefore, strategic leadership is important not only for performance outcomes but also for its capacity to generate normative stability within organizations.

In educational organizations, strategic leadership also requires a value-based orientation. Fullan (2014) argues that sustainable school improvement depends not only on technical planning but also on a **moral purpose**. Within this framework, strategic leadership integrates pedagogical vision with ethical orientation. As a result, the normative structure of the school is shaped not randomly but through a deliberate and long-term strategic direction.

2.3.2 Ethical Governance

One of the most critical dimensions of professional educational leadership is **ethical governance**. The ethical leadership literature demonstrates that leaders' fair, transparent, and consistent behaviors function as norm-generating mechanisms within organizations (Brown, Treviño, & Harrison, 2005). Ethical governance is not merely a matter of individual virtue; rather, it refers to the conduct of decision-making processes in a fair, accountable, and transparent manner.

Colquitt's (2001) model of organizational justice shows that distributive (resource allocation), procedural (decision-making processes), interactional (communication style), and informational justice dimensions influence employees' attitudes and behaviors. In educational organizations, practices such as scheduling, task assignments, performance evaluation procedures, and reward systems directly affect perceptions of justice. Tschannen-Moran (2014) demonstrates that trust in schools is closely associated with leaders' fair and consistent behavior.

Ethical governance also functions as a **normative role model**. According to social learning theory (Bandura, 1977), individuals learn norms through observation. The respectful communication style and conflict resolution approaches adopted by school leaders can become behavioral standards for

teachers. For this reason, ethical governance constitutes a central mechanism in the institutionalization of civility culture.

However, the literature also discusses the risk that ethical governance may remain at the level of rhetoric. Treviño, Brown, and Hartman (2003) show that inconsistencies between discourse and practice may lead to a loss of trust. Therefore, ethical governance must be manifested not only declaratively but also concretely at behavioral and structural levels.

2.3.3 Participatory Decision-Making

Participatory leadership refers to the meaningful involvement of teachers in decision-making processes within the school. Leithwood and Jantzi (2006) demonstrate that transformational and participatory leadership practices have positive effects on teacher commitment and organizational commitment. Participation is not merely a motivational tool; it also functions as a mechanism for recognizing professional status and generating respect.

The distributed leadership approach (Spillane, 2006; Harris, 2008) argues that leadership cannot be reduced to a single position but rather constitutes a practice shared through organizational interaction. This perspective encourages the collective utilization of professional expertise. Teachers' participation in decision-making processes supports the expertise-based autonomy that is central to professional logic (Freidson, 2001).

The normative dimension of participation lies in its capacity to generate respect and trust. Bryk and Schneider (2002) demonstrate that relational trust in schools is strengthened through shared decision-making processes. Conversely, teachers who are excluded from decision-making may develop organizational silence (Morrison, 2014). For this reason, participatory decision-making represents one of the fundamental preconditions for psychological safety and the development of civility culture.

2.3.4. Professional Development Support

Professional educational leadership includes the responsibility to support the continuous development of teachers. Darling-Hammond (2010) demonstrates that teacher professional development is strongly associated with student achievement. Professional development therefore represents not only an increase in technical skills but also the institutionalization of respect for professional expertise.

Glickman, Gordon, and Ross-Gordon (2014) state that one of the core functions of instructional leadership is to provide feedback and developmental

support. Effective feedback mechanisms strengthen teachers' professional identities. This process reinforces norms of respect because it creates an environment in which professional expertise is recognized and valued.

Furthermore, OECD TALIS reports (OECD, 2019) indicate that school leaders' practices supporting teacher development play a decisive role in shaping school climate and job satisfaction. Professional development support strengthens collective efficacy and increases social capital within schools (Goddard et al., 2000).

2.3.5. Holistic Evaluation of the Dimensions

When these four dimensions are considered together, professional educational leadership can be defined as follows:

- **Strategic leadership** generates normative stability.
- **Ethical governance** establishes standards based on justice and trust.
- **Participatory decision-making** institutionalizes respect for professional expertise.
- **Professional development support** strengthens professional identity.

The interaction of these dimensions determines the normative capacity of the school. Professionalization therefore represents not merely technical administrative efficiency but also the institutionalization of norms of respect, trust, and collaboration within the organization.

3. Theoretical Framework II: Teacher Civility Culture

3. 1. Conceptual Point of Departure: From Incivility to Positive Norm Production

In the organizational behavior literature, the concept of **civility** has largely been examined through studies on **workplace incivility**. Andersson and Pearson (1999) defined workplace incivility as *low-intensity deviant behaviors with ambiguous intent that violate norms of mutual respect*, and demonstrated that such behaviors may escalate through cycles of reciprocity. This “**spiral model**” illustrates how small-scale violations of respect may gradually increase organizational conflict and distrust over time.

Subsequent studies have shown that incivility is not merely an interpersonal problem but also a significant variable influencing performance, job satisfaction,

and organizational commitment. Porath and Pearson (2013) found that incivility leads to significant declines in productivity and creativity, while Leiter, Laschinger, Day, and Oore (2011) demonstrated a positive relationship between incivility and burnout. This body of literature clearly indicates that norms of respect represent a strategic factor for organizational sustainability.

However, focusing solely on incivility remains insufficient for explaining the production of positive norms within organizations. Therefore, in this section, **teacher civility culture** is conceptualized not merely as the absence of respect violations but as an **institutionalized, positive, and sustainable relational order**. This perspective is consistent with the literature on **positive organizational behavior** (Luthans, 2002) and **social capital theory** (Putnam, 2000).

3.2. The Specificity of Civility in the School Context

Educational organizations possess a higher level of normative density compared to many other types of organizations. Hoy and Miskel (2013) emphasize that schools represent both bureaucratic and cultural structures. Teachers are not merely employees; they are also professionals who transmit values. For this reason, norms governing interactions among teachers may indirectly influence the social values transmitted to students.

Cohen, McCabe, Michelli, and Pickeral (2009), in their analysis of school climate, identify relational quality as one of its core dimensions. Weak norms of trust and respect within schools may affect not only relationships among teachers but also the learning environment experienced by students. Bryk and Schneider (2002) demonstrate that relational trust constitutes a critical factor in the success of school reform processes.

Therefore, teacher civility culture should be understood not merely as interpersonal harmony but as an institutional variable that influences pedagogical capacity.

3.3. Theoretical Foundations of Teacher Civility Culture

Teacher civility culture refers to the institutionalized form of norms of professional respect, constructive communication, trust, and collaboration within the school. This structure cannot be explained solely through individual personality traits; rather, it emerges from the interaction of social, organizational, and normative processes. For this reason, multiple theoretical frameworks must be considered together in order to explain teacher civility culture. In this section, teacher civility culture is examined on the basis of **social exchange theory**,

social learning theory, organizational justice theory, the psychological safety approach, and social capital theory.

3.3.1 Social Exchange Theory and the Norm of Reciprocity

Social exchange theory argues that organizational relationships are fundamentally based on reciprocity (Blau, 1964). According to this theory, individuals develop positive or negative behaviors in response to the level of support, respect, and fairness they receive. Gouldner's (1960) concept of the **norm of reciprocity** suggests that social relationships are grounded in an obligation to return benefits received from others.

In the school context, teachers shape their behaviors according to the level of respect and fairness they experience from colleagues and administrators. Teachers who feel respected and valued are more likely to engage in collaboration, share knowledge, and provide support to others. Conversely, perceptions of respect violations may trigger withdrawal, organizational silence, and passive resistance behaviors (Morrison, 2014).

Within this framework, **teacher civility culture** can be understood as the institutionalized form of the reciprocity norm within the school. If reciprocity of respect becomes sustained within the school environment, it evolves into a collective behavioral norm. Therefore, civility culture represents not merely an individual attitude but the organizational manifestation of the social exchange process.

3.3.2 Social Learning Theory and the Diffusion of Norms

Bandura's (1977) **social learning theory** suggests that individuals acquire behavioral patterns through observation and modeling. In organizational settings, the formation of norms largely occurs through the repetition and diffusion of modeled behaviors.

In the school context, administrators and senior teachers function as carriers of behavioral standards. If a school leader manages conflicts fairly, uses a constructive communication style, and consistently applies norms of respect, these behaviors may gradually spread among teachers. The ethical leadership model developed by Brown, Treviño, and Harrison (2005) demonstrates that leaders shape organizational norms by serving as role models.

From this perspective, civility culture does not emerge randomly; rather, it spreads through processes of observational learning and norm internalization. Therefore, **teacher civility culture is closely and directly related to leadership behaviors.**

3.3.3 Organizational Justice Theory and Norms of Respect

The organizational justice literature demonstrates that employees' perceptions of decision-making processes within organizations play a decisive role in shaping their behaviors. Colquitt (2001) conceptualizes justice through four dimensions:

1. **Distributive justice** (allocation of resources)
2. **Procedural justice** (decision-making processes)
3. **Interactional justice** (communication style and respect)
4. **Informational justice** (openness and transparency)

In educational organizations, practices such as scheduling, duty assignments, committee appointments, and performance evaluations directly influence teachers' perceptions of justice. The dimension of **interactional justice** is particularly closely related to norms of respect and civility.

In environments where perceptions of justice are weak, interpersonal norms of respect may gradually erode. For this reason, **teacher civility culture is strengthened through governance practices grounded in organizational justice.**

3.3.4 The Psychological Safety Approach

Edmondson (1999) defines **psychological safety** as the absence of fear of punishment when individuals make mistakes or express differing opinions within a team. Psychological safety constitutes a fundamental condition for open communication and learning behavior.

In the school context, psychological safety influences teachers' willingness to share pedagogical innovations, provide feedback, and seek support from colleagues. Tschannen-Moran (2014) demonstrates that trust-based leadership plays a decisive role in teacher job satisfaction and organizational commitment.

There is a reciprocal relationship between civility culture and psychological safety:

- **Norms of respect strengthen psychological safety.**
- **A strong psychologically safe environment encourages respectful communication.**

Therefore, psychological safety functions both as an outcome and a reinforcing mechanism of civility culture.

3.3.5 Social Capital Theory and Collective Efficacy

Putnam (2000) conceptualizes **social capital** through networks, norms, and trust. In schools, trust and solidarity among teachers generate **collective efficacy**. Goddard, Hoy, and Woolfolk Hoy (2000) demonstrate that collective teacher efficacy is strongly associated with student achievement.

Civility culture represents the behavioral manifestation of social capital. Collegial solidarity, knowledge sharing, and collaborative problem-solving behaviors serve as mechanisms through which social capital is produced. Therefore, teacher civility culture is not merely an ethical value but also a structural resource that supports the academic capacity of schools.

3.3.6 Positive Organizational Behavior and the Well-Being Perspective

The literature on **positive organizational behavior** (Luthans, 2002) suggests that positive psychological capital enhances performance within organizations. The institutionalization of positive elements such as respect, hope, resilience, and optimism strengthens organizational well-being.

Leiter and Maslach (2009) demonstrate that burnout is associated with interpersonal incivility. This finding indicates that civility culture is closely related to teacher well-being.

3.3.7 Theoretical Integration

When the theoretical frameworks discussed above are considered together, **teacher civility culture** can be conceptualized as follows:

- **Social exchange theory** → **norm of reciprocity**
- **Social learning theory** → **diffusion of modeled behavior**
- **Organizational justice** → **perception of respect**
- **Psychological safety** → **open communication**
- **Social capital** → **collective efficacy**

Taken together, these theories demonstrate that teacher civility culture represents a **multidimensional and institutional structure** within schools.

4. Structural Dimensions of Teacher Civility Culture

Teacher civility culture refers to the institutionalized form of norms of mutual respect, trust, and constructive interaction within schools. Considering

the theoretical foundations discussed in the previous section—namely **social exchange, social learning, organizational justice, psychological safety, and social capital**—it becomes evident that civility culture represents a multidimensional construct. In this context, teacher civility culture is conceptualized, in accordance with the literature, across **five fundamental structural dimensions**:

1. **Professional Respect and Recognition of Status**
2. **Communication Quality and Interactional Respect**
3. **Constructive Conflict Resolution and Fair Processes**
4. **Collegial Solidarity and Collaboration Norms**
5. **Institutional and Psychological Trust**

These dimensions constitute complementary structural components that collectively shape the normative capacity of schools.

4.1 Professional Respect and Recognition of Status

Professional respect refers to the recognition and protection of teachers' professional expertise, pedagogical competence, and professional autonomy. According to Freidson's (2001) concept of professional logic, the defining characteristic of professions lies in their capacity to generate norms based on specialized expertise. In environments where expertise is not recognized, professional identity weakens and tensions related to professional status may emerge.

In the school context, professional respect includes the following elements:

- Considering teachers' opinions in decision-making processes
- Avoiding interference in areas of professional expertise
- Respecting pedagogical differences
- Making professional efforts visible and acknowledged

Within the organizational justice literature, the dimension of **interactional justice** (Colquitt, 2001) emphasizes that individuals should be treated with dignity and respect. In schools, allowing teachers to express their opinions in meetings without interruption, refraining from dismissive attitudes, and presenting criticism in a constructive manner are indicators of professional respect.

In environments where professional respect weakens, organizational silence may increase (Morrison, 2014) and teachers' professional commitment may

decline. Therefore, professional respect represents the **core dimension of civility culture**.

4.2 Communication Quality and Interactional Respect

The most visible manifestation of civility culture is the language of communication. Communication quality does not simply refer to a polite tone; rather, it involves open, transparent, timely, and non-personalized feedback.

Carmeli and Gittell (2009) demonstrate that mutual respect strengthens relational coordination. In educational organizations, communication quality may be evaluated through the following indicators:

- A culture of constructive feedback
- The absence of dismissive or insinuating expressions
- Open information sharing
- Transparent explanations

Edmondson's (1999) psychological safety framework indicates that open communication environments support learning behaviors. When communication becomes threatening or sarcastic, psychological safety weakens and teachers may refrain from expressing their ideas.

Therefore, communication quality represents the **behavioral manifestation of civility culture** and is directly related to psychological safety.

4.3 Constructive Conflict Resolution and Fair Processes

Schools are organizations based on human relationships, and conflict is inevitable. The crucial issue is not the existence of conflict but how it is managed. Rahim (2002) demonstrates that collaborative conflict resolution enhances organizational performance.

Within a civility culture, conflict:

- Is not personalized
- Is addressed through open dialogue
- Is resolved through fair processes
- Does not escalate into retaliation or gossip

Bryk and Schneider (2002) show that relational trust is strengthened through fair processes. When teachers believe that disagreements will be addressed fairly, normative stability increases.

Constructive conflict resolution intersects with both **organizational justice** and **psychological safety**. When this dimension is weak, micro-level incivility may escalate over time (Andersson & Pearson, 1999).

4.4 Collegial Solidarity and Collaboration Norms

Civility culture is not merely an individual behavior but a pattern of **collective solidarity**. Putnam (2000) conceptualizes social capital through trust and norms. In schools, social capital is produced through collaboration and knowledge sharing among teachers.

Goddard, Hoy, and Woolfolk Hoy (2000) demonstrate that collective teacher efficacy is closely associated with student achievement. In schools where norms of solidarity are strong:

- Teaching materials are shared more frequently
- Mentoring is provided to new teachers
- Achievements are collectively owned

This dimension represents the capacity of civility culture to generate **social capital** within the organization.

4.5 Institutional and Psychological Trust

Trust represents both a **precondition and an outcome** of civility culture. Tschannen-Moran (2014) identifies five dimensions of trust in schools: competence, honesty, openness, benevolence, and reliability.

Edmondson (1999) defines **psychological safety** as the absence of fear of punishment when individuals express their opinions. In schools with high psychological safety, teachers:

- Experiment with innovative practices
- Provide feedback
- Participate in collegial collaboration

When trust weakens, organizational silence and defensive behaviors tend to increase. Institutional trust (trust in leadership) and psychological trust (team-level trust) operate together. Professional leadership plays a decisive role in establishing this environment of trust.

4.6 Interaction Among Dimensions

These five dimensions do not operate independently. Professional respect influences communication quality; communication quality shapes conflict resolution; constructive conflict resolution strengthens trust; trust increases solidarity; and solidarity reinforces professional respect.

Therefore, **teacher civility culture constitutes a circular and self-reinforcing normative system**. It emerges through the interaction of professional respect, communication quality, constructive conflict resolution, solidarity, and trust. Beyond individual politeness, this structure represents a **strategic organizational resource** that determines the social capital and learning capacity of schools.

5. Civility Culture and the Learning School

The concept of the **learning school** represents the adaptation of organizational learning theory to the educational context and argues that schools should not only function as institutions that transmit knowledge but also as organizations that continuously learn and renew themselves. Senge (1990) conceptualized learning organizations through five disciplines: **systems thinking, personal mastery, mental models, shared vision, and team learning**. Within this framework, learning becomes not merely an individual process but a collective and cultural phenomenon.

However, the sustainability of the learning school approach depends not only on structural arrangements but also on relational and normative conditions. Open communication, a culture of feedback, and the encouragement of critical thinking constitute fundamental prerequisites of learning organizations. Edmondson (1999) demonstrated that team learning can occur only in environments characterized by **psychological safety**. In environments lacking psychological safety, individuals tend to avoid sharing ideas due to fear of making mistakes, which limits organizational learning.

At this point, **teacher civility culture emerges as the primary normative mechanism forming the relational infrastructure of the learning school**.

5.1 Civility Culture and Knowledge Sharing

One of the key dynamics of the learning school is the sharing of knowledge and experience among teachers. Argyris and Schön (1978) argued that organizational learning occurs through **double-loop learning**, which requires

open criticism and constructive feedback. In environments where norms of respect are weak, teachers may refrain from providing critical feedback.

Carmeli and Gittell (2009) demonstrated that mutual respect strengthens relational coordination and knowledge sharing. When civility culture is strong in schools:

- Teachers become more willing to share lesson plans
- Innovative practices are discussed among colleagues
- Experiences of failure are treated as learning opportunities

This situation strengthens the **collective knowledge production capacity** of the learning school.

5.2 Civility Culture and Innovation

Innovative school practices depend largely on teachers' willingness to take risks and engage in trial-and-error processes. Edmondson (2004) demonstrated that psychological safety is directly associated with innovative behavior. Innovation increases in environments where risk-taking is not punished and mistakes are treated as opportunities for learning.

Porath and Pearson (2013) found that incivility consumes cognitive resources and reduces creativity. This finding indicates that norms of respect are directly associated with innovative capacity. In educational organizations, the diffusion of pedagogical innovations depends on norms of trust and support among teachers.

Therefore, **civility culture functions as the social foundation of the school's capacity for innovation.**

5.3 Civility Culture and Organizational Silence

The literature on **organizational silence** examines situations in which employees deliberately refrain from expressing their ideas and criticisms (Morrison, 2014). Silence often emerges due to fear of punishment or perceptions of disrespect.

In organizations characterized by high levels of psychological safety and interactional justice, silence behaviors tend to decrease. Tschannen-Moran (2014) demonstrated that trust-based school climates increase teachers' willingness to engage in open communication.

In schools with strong civility culture:

- Teachers can provide feedback to school leadership
- Pedagogical mistakes can be openly discussed
- Problems are addressed rather than suppressed

Such conditions strengthen the **critical thinking capacity of the learning school**.

5.4 Civility Culture and Collective Efficacy

Collective efficacy refers to teachers' shared belief that they can work together to improve student achievement (Goddard, Hoy, & Woolfolk Hoy, 2000). Schools with high levels of collective efficacy demonstrate stronger collaboration and a greater sense of shared responsibility.

According to Putnam's (2000) social capital perspective, trust and norms increase the capacity for collective action. Civility culture represents the behavioral manifestation of social capital. In schools where norms of solidarity are strong:

- Teachers support one another's classroom practices
- Collaborative problem-solving increases
- Successes are collectively owned rather than individually claimed

These conditions support the sustainability of the **learning school**.

5.5 Civility Culture as a Normative Infrastructure

The learning school approach often focuses on structural mechanisms such as meeting structures, feedback systems, and data analysis processes. However, when the normative infrastructure is weak, these mechanisms may become ineffective.

Bryk and Schneider (2002) demonstrated that **relational trust** is critical for the success of school reforms. The success of reform initiatives is closely linked to the level of trust and respect among teachers.

Within this context, civility culture:

- Enables structural arrangements to function effectively
- Nurtures psychological safety
- Institutionalizes learning behaviors

- Increases the adaptive capacity of the school

Therefore, **civility culture represents the invisible yet decisive normative infrastructure of the learning school.**

5.6 Theoretical Conclusion

When the literature is considered collectively, the following conclusion emerges: **Teacher civility culture constitutes the behavioral and normative foundation of the learning school.**

Without norms of respect and psychological safety:

- Open communication cannot be sustained
- Innovative practices do not diffuse
- Collective efficacy cannot develop
- Reform initiatives cannot become sustainable

For this reason, the relationship between **professional educational leadership and civility culture** is not merely a matter of interpersonal harmony; rather, it represents a **strategic factor determining the learning capacity of schools.**

6. Psychological Safety and School Climate

6.1 The Theoretical Foundation of Psychological Safety

The concept of **psychological safety** occupies a central place in the literature on organizational learning and team performance. Edmondson (1999) defines psychological safety as *a shared belief among team members that they will not be punished or humiliated for expressing ideas, making mistakes, or taking risks*. This concept demonstrates that trust is not merely interpersonal goodwill but a social condition necessary for learning and innovation.

In organizational contexts, psychological safety:

- Encourages open communication
- Strengthens feedback culture
- Supports innovative behavior
- Enables learning from mistakes

Edmondson (2004) demonstrated that learning behaviors increase in teams with high levels of psychological safety. This is particularly important

for educational organizations, as schools require continuous feedback and professional learning.

6.2 School Climate: Normative and Relational Dimensions

The school climate literature examines the social atmosphere of schools and the shared perceptions within them. Cohen, McCabe, Michelli, and Pickeral (2009) conceptualize school climate through four dimensions: **safety, relationships, teaching and learning practices, and the institutional environment**. The relational dimension includes the level of respect and trust among teachers.

The organizational climate framework developed by Hoy, Tarter, and Kottkamp (1991) demonstrates that school climate influences teacher behavior and student achievement. Open climate structures are associated with higher levels of trust and collaboration.

School climate also reflects the perceived outcomes of leadership practices. Tschannen-Moran (2014) demonstrates that trust within schools is directly related to leadership behaviors. Fair and consistent leadership practices create a trust-based climate.

6.3 The Relationship Between Psychological Safety and Civility Culture

Psychological safety and civility culture represent two normative structures that mutually reinforce one another.

- When **civility culture** is strong, psychological safety increases.
- When **psychological safety** increases, open communication and respectful interaction are reinforced.

Social learning theory (Bandura, 1977) helps explain this process: when respectful communication becomes normative, individuals become less hesitant to take risks. Conversely, the **incivility spiral model** proposed by Andersson and Pearson (1999) shows that small violations of respect may gradually erode trust.

Therefore, psychological safety functions both as an outcome of civility culture and as a mediating mechanism that sustains it.

6.4 Psychological Safety, Learning, and Performance

Bryk and Schneider (2002), in their study of Chicago schools, demonstrated that **relational trust** is critical for the success of school reforms. In schools with higher levels of trust, reform initiatives proved more sustainable.

Goddard, Hoy, and Woolfolk Hoy (2000) found that **collective efficacy** is strongly associated with student achievement. Collective efficacy, in turn, is nurtured by norms of trust and solidarity.

Within this framework, psychological safety:

- Increases teacher job satisfaction
- Strengthens organizational commitment
- Supports learning behaviors
- Contributes indirectly to student achievement

6.5 The Normative Chain: Leadership → Climate → Trust → Civility

When the literature is considered collectively, the following **normative chain** emerges:

Professional Educational Leadership

→ **Fair and Participatory School Climate**

→ **Psychological Safety**

→ **Teacher Civility Culture**

→ **Learning School Capacity**

This chain constitutes the **theoretical backbone of the proposed model**.

7. International Comparative Perspective: Professionalization, Trust, and Normative Capacity

Teacher civility culture is not only related to individual interactions within schools but is also associated with professionalization structures at the system level. The degree of centralization within education systems, leadership preparation models, teacher autonomy, and accountability mechanisms indirectly shape the normative capacity of schools. In this section, the cases of **Finland, Singapore, and Türkiye** are examined from a comparative perspective.

7.1 Finland: The Trust-Based Professional Autonomy Model

The Finnish education system is widely recognized for its high level of teacher autonomy and its governance model based on trust. Sahlberg (2011) characterizes the Finnish model as “**trust-based accountability**,” emphasizing that the system relies on low levels of external control and high levels of professional trust.

Key Characteristics

- Teaching is a highly selective and prestigious profession.
- School leaders are prepared through strong pedagogical leadership frameworks.
- Pressure from standardized testing is relatively low.
- Competition among schools is limited.

This structure allows norms of professional respect and trust among teachers to become institutionalized. OECD (2019) TALIS data indicate that teachers in Finland report high levels of participation in decision-making processes and strong perceptions of professional support.

From the perspective of Bryk and Schneider’s (2002) relational trust framework, trust in Finland functions as a **structural system norm**. This suggests that civility culture is produced not merely at the individual level but at the systemic level.

7.2 Singapore: Selective Leadership and Systematic Norm Production

The Singapore education system stands out for its high performance and its strong leadership development model. Leithwood and Louis (2012) note that school leadership in Singapore is systematically planned and that leadership career pathways are clearly structured.

Key Characteristics

- Centralized and selective preparation programs for school leaders
- Performance-based evaluation systems
- Strong professional development infrastructure
- Clear vision and strategic direction

In the Singaporean model, trust is not left entirely to informal processes; rather, it is produced within a **structured professionalization framework**. Leadership training systematically develops ethical governance and strategic leadership capacities.

Within this context, civility culture emerges alongside both high performance expectations and strong professional support mechanisms. Professionalization here takes the form of **centrally structured norm production**.

7.3 Türkiye: Centralized Structure and School-Level Normative Variation

The Turkish education system operates within a more centralized structure. Decision-making processes are largely determined at the central level, and the autonomy of school leaders may remain limited.

OECD (2019) data indicate that teachers in Türkiye report lower levels of participation in decision-making compared to the OECD average. This situation may influence dimensions such as professional respect and participatory leadership.

However, differentiation at the school level is still possible within centralized systems. The ethical governance and participatory leadership capacity of the school principal may significantly influence the normative structure of the school. For this reason, in the Turkish context, civility culture often varies depending on the **professional leadership capacity of school administrators**.

7.4 Comparative Analysis: Normative Capacity Production

Table 1. Comparative Normative Capacity Production

Country	Professionalization Structure	Level of Trust	Norm Production Mechanism
Finland	High autonomy	High	Professional culture-based
Singapore	Selective and centralized leadership	Medium–High	Systematic leadership development
Türkiye	Centralized structure	Variable	Dependent on school leadership

This comparison demonstrates that professionalization is not merely a technical arrangement but also a **process of norm production**.

- In **Finland**, trust functions as a system-level norm.

- In **Singapore**, norm production is structured through leadership education.
- In **Türkiye**, normative capacity largely depends on school-level leadership.

7.5 Theoretical Implication

The international comparison points to the following theoretical conclusion: **Teacher civility culture is closely associated with the professionalization model operating at the system level.** In systems characterized by high autonomy and trust, norm production tends to emerge more naturally and sustainably. In more centralized systems, however, norm production becomes more dependent on the quality of leadership at the school level. This analysis supports the argument that **professional educational leadership is a strategic variable determining the normative capacity of schools.**

8. Discussion

This study positions **teacher civility culture** not merely at the level of individual behavior but as a **normative and structural organizational variable** within the framework of professional educational leadership and psychological safety. The resulting theoretical synthesis proposes a **multi-layered model** that integrates the literature on leadership, organizational trust, and learning schools. In this section, the findings and the proposed model are discussed in terms of **(i) theoretical contribution, (ii) practical implications, (iii) policy implications, and (iv) the Türkiye/Ankara context.**

8.1 Theoretical Contribution

8.1.1 From Incivility Literature to Positive Norm Production

In organizational behavior literature, the concept of civility has predominantly been examined through the lens of **workplace incivility** (Andersson & Pearson, 1999; Porath & Pearson, 2013). This study expands the conceptual framework by approaching civility not merely as the absence of negative behavior but as **the production of positive organizational norms.**

This perspective addresses three theoretical gaps:

1. It integrates civility with **leadership theory.**
2. It positions **psychological safety as a mediating mechanism.**
3. It links **civility culture to the capacity of learning schools.**

Thus, civility culture is conceptualized within a framework extending from **micro-level behavior to macro-level institutional capacity**.

8.1.2 Professionalization and Normative Capacity

Freidson's (2001) concept of **professional logic** emphasizes the production of norms based on professional expertise. This study positions professional educational leadership not merely as technical competence but as a **capacity for normative production**, thereby bridging the sociology of professions with the educational leadership literature.

The findings of Leithwood et al. (2008), which highlight the indirect impact of leadership on student achievement, are reinterpreted in this model through the lens of **normative mechanisms**. Leadership shapes not only academic performance but also the **relational order of the organization**.

8.1.3 The Central Role of Psychological Safety

Edmondson's (1999) concept of **psychological safety** is positioned in this model as a **mediating mechanism**. While psychological safety is often linked to team performance in the literature, this study conceptualizes it as a **sustainability mechanism for civility culture**.

Within this framework, the following theoretical chain is established: **Professional Leadership → Fair Climate → Psychological Safety → Civility Culture**

8.2 Practical Implications

8.2.1 School Leadership Training

One of the most important practical implications of this study is that **school principal preparation programs should include normative leadership capacity**. Leadership training should focus not only on regulations and administrative processes but also on:

- Ethical governance
- Fair decision-making
- Conflict management
- Building psychological safety

8.2.2 School-Based Intervention Programs

Civility culture cannot be sustained solely through individual **communication training**. Porath (2016) demonstrates that superficial civility training programs do not produce lasting norms.

Instead, structural interventions are required, such as:

- Participatory decision-making mechanisms
- Transparent process design
- Constructive feedback systems
- Collegial mentoring structures

8.2.3 Learning School Development Plans

When preparing school development plans, not only academic targets but also **normative indicators** should be monitored, including:

- Teacher trust surveys
- Communication quality indicators
- Participation levels
- Conflict resolution processes

These indicators can be considered **early signals of a school's learning capacity**.

8.3 Policy Implications

8.3.1 Centralization and Norm Production

International comparisons indicate that **norm production is more sustainable in trust-based systems** (Sahlberg, 2011). In centralized systems, however, the professional capacity of school leaders becomes more decisive.

At the policy level, the following recommendations can be proposed:

- Professional competency criteria should be strengthened in school leader selection.
- Leadership preparation programs should be systematically structured.
- A balance should be established between **school autonomy and accountability**.

8.3.2 Trust-Based Accountability

Excessive performance pressure and inspection-oriented systems may weaken normative capacity (Ball, 2003). Therefore, **trust-based accountability models** should be developed.

8.4 Evaluation in the Context of Türkiye and Ankara

The education system in Türkiye operates within a centralized structure, and the decision-making authority of school leaders may be limited to a certain extent. OECD (2019) data indicate that teachers' perceptions of participation in decision-making are below the OECD average.

In the **Ankara context**, particularly in metropolitan schools:

- Teacher diversity is high
- Bureaucratic pressure is significant
- Performance expectations have increased

Under these conditions, the **ethical governance capacity of school leaders becomes decisive**. For school leaders working in Ankara, normative leadership is not only relational but also a **strategic necessity**.

In public schools in Ankara:

- When participatory decision-making processes are strengthened
- When psychological safety environments are established
- When norms of professional respect are institutionalized the strengthening of **civility culture** becomes possible.

Within this framework, the model provides a **theoretical tool explaining school-level differentiation within Türkiye's centralized system**.

8.5 Overall Evaluation

This study positions **teacher civility culture** within a framework that is:

- Leadership-based
- Trust-mediated
- Focused on normative capacity
- Embedded within the learning school perspective

Civility culture represents the **behavioral manifestation of a school's social capital** and a **precondition for its learning capacity**.

9. Conclusion and Policy Implications

This study positions **teacher civility culture** not merely as individual politeness or communication style but as a **strategic organizational structure that determines the normative capacity of schools**. Shaped through professional educational leadership, school climate, and psychological safety, this culture forms the behavioral foundation of the **learning school model**.

9.1 Conceptual Conclusion

When the literature synthesis and the theoretical model are considered together, the following fundamental conclusion emerges:

Teacher civility culture represents a form of normative capital produced by professional leadership and institutionalized through psychological safety.

This conclusion offers three important conceptual implications:

1. Civility culture functions as a **trust mechanism** that reduces organizational silence and enables open communication.
2. Professional educational leadership represents not only technical administrative competence but also a **capacity for norm production**.
3. The sustainability of the learning school depends on the **strength of its normative infrastructure**.

Therefore, school development should be evaluated not only through academic performance indicators but also through **relational and normative indicators**.

9.2 Implications for Strategic Management

School leadership is not merely the management of resources or the implementation of regulations; it is also a **social leadership process** in which norms of trust, respect, and justice are produced.

From a strategic perspective:

- Participatory decision-making mechanisms should be strengthened.
- Perceptions of fairness and process transparency should be enhanced.
- Constructive conflict resolution systems should be institutionalized.
- Professional development should be supported.

Such practices will strengthen civility culture and enhance the **collective efficacy of schools**.

9.3 Policy-Level Implications

9.3.1 Leadership Selection and Preparation Policies

The selection and preparation of school principals should incorporate **normative leadership capacity** as a key criterion. Leadership development programs should include the following dimensions:

- Ethical governance
- Trust building
- Creating psychological safety
- Participatory leadership
- Conflict management

These dimensions are as important as technical competencies.

9.3.2 Trust-Based Accountability

Excessive supervision and performance pressure may weaken normative capacity. Therefore, at the policy level:

- **Trust-based accountability models** should be developed.
- Regulations supporting **professional autonomy** should be strengthened.
- Practices expanding decision-making authority at the **school level** should be introduced.

9.3.3 School Climate Monitoring Systems

Normative indicators may be incorporated into national school development monitoring systems, such as:

- Psychological safety indices
- Participation and justice perception indicators
- Collegial solidarity measures
- Communication quality assessments

These indicators may help identify **early signals of a school's learning capacity**.

9.4 Policy Orientation in the Context of Türkiye and Ankara

Within Türkiye's centralized education structure, the **normative capacity of school leadership plays a decisive role**. In metropolitan contexts such as Ankara:

- Teacher diversity is high,
- Bureaucratic pressure is intense,
- Performance expectations have increased.

Under these conditions, the ethical and participatory governance capacity of school leaders becomes critical for the development of civility culture.

In public schools in Ankara, when the following are institutionalized:

- Transparent decision-making processes,
- Practices strengthening professional respect,
- Trust-based communication environments, the **learning school structure can become more sustainable**.

9.5 Recommendations for Future Research

Empirical testing of the proposed model could contribute significantly to the literature, particularly through:

- **Second-order Confirmatory Factor Analysis (CFA)**
- **Serial mediation models**
- **Multi-group analyses** (e.g., seniority, school type, socioeconomic context)
- **Longitudinal research designs**

Furthermore, international comparative quantitative studies could more clearly reveal the relationship between **normative capacity and system structures**.

9.6 General Synthesis

This study conceptualizes **teacher civility culture** as:

- Produced through **professional leadership**,
- Institutionalized through **psychological safety**,
- Supporting the **learning capacity of schools**,
- A **normative structure grounded in social capital**.

In conclusion, **the academic success of a school depends first on the quality of its normative order**. A learning organization cannot be sustained in schools where civility culture is weak. Therefore, **professional educational leadership represents not only an administrative responsibility but also a normative leadership responsibility**.

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